

**Name:** David Klein  
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**Location of Interview:** Home of David Klein in Fairbanks, Alaska  
**Interviewer:** Karen Brewster

**Brief Summary of Interview:** This oral history mainly concerns the science exchanges that took place between scientists from the U.S. and the Soviet Union/Russia because of the Nixon and Brezhnev Accord. Mr. Klein traveled to the Soviet Union/Russia three times and he shares stories about those trips, including talking about places he went and people he met. He also talks about when the Soviet/Russian scientists came to Alaska and what they did while here.

KAREN BREWSTER: Today is October 11, 2014, and this is Karen Brewster and Dave Klein continuing on our life history project. And last time we were talking about some of your international work and we didn't finish, so tonight we thought we'd continue. And you were going to talk about your experiences in Russia.

DAVID KLEIN: Okay, we should correct that because the experiences initially was not Russia, it was the Soviet Union. And then -- so it was through an agreement between the U.S. and Soviet Union, between Nixon and Brezhnev. President Nixon and Brezhnev, the Soviet Union leader at the time. And it was an agreement -- first agreement was on science exchanges, then it was expanded to include the humanities later. But my involvement was in the science exchanges. So the first one was in 1974, I think this is the correct date, and then the second one was '76, and the third one was '89. So of interest to me, immense interest to me, was the fact that in '74 and '75 under Brezhnev, I think it was Brezhnev in both '74 and '76 who had made the agreement. It was some liberalization, of course, in the Soviet Union, but a recognition that science exchanges shouldn't be curtailed because we were sort of in a cold war with the Soviet Union. Which was a good move on the parts of both Brezhnev and Nixon to be able to bring about that breakdown of the Cold War/Iron Curtain, or whatever it was called. And so it was all official. It had to be done through the State Department, these exchanges, and, of course, there had to be proper visas and there had to be funding. And the funding came from this exchange -- as a result of this exchange agreement. But, of course, everybody on both sides had to go through inspections to be sure they could be qualified to represent their countries. And once qualified to represent their countries, officially would be a scientist of some respect and recognition. But unofficially there was, you know, what can we learn, other components of the government, what can we learn. So the Russians, or the Soviets, were wary that we might be spies. And the U.S. there was some -- not necessarily worry that we were not going to represent the country properly, but would we be helped to represent the interests of the FBI or CIA, which meant when we go over there, would we agree to be spies for them, those agencies. Of course, with the media, American media, which at least was relatively free compared to what the situation was in Russia. So the government interpreted -- they went ahead with this agreement but they then thought some of us might be spies. And as far as I know that was a possibility, but it

certainly wasn't a possibility there. So the first time I went over was with -- there were three of us from the university -- two from the university. Jack Luick, who was with the Institute of Arctic Biology and Department of Biology and Wildlife. And he was doing a lot of research on caribou and working with -- a lot of work on stable isotopes and radio fall -- fallout of radionuclides from atmospheric testing of bombs, both in the U.S. and Russia, primarily. He was involved in this relationship to caribou of the lichens, which would absorb the cesium, radioactive cesium, and hold it in the lichens. And therefore it wasn't a big deal unless you accumulated it. And how could you accumulate it? Well, caribou could accumulate it by eating the lichens and accumulating this often in the fatty tissues, but more commonly in the bone marrow. And so its biological turnover in organisms was fairly fast so that caribou would lose most of it in the summertime when they were not feeding on lichens, but then in the wintertime they would pick it up and it would take a while. And so some of the early work had been done after the -- Well, the early work done even before the Chernobyl accident had been done with reindeer in Scandinavia. But mainly in Sweden people had started some of this work and showed this relationship between the lichens and the reindeer. And there was concern that they didn't know much about it, so if you ate a lot of the caribou that had it, would it affect people? And so here in Alaska they were looking at Anaktuvuk Pass where people lived heavily on caribou more so than any other communities in Alaska. And so then the Atomic Energy Commission supported research on what are the possible effects there at Anaktuvuk, so they -- people that were working there worked through the university sometimes. And Jack Luick was sort of doing research with different feeding trials of reindeer or caribou in captivity, and he was the one that showed that it did accumulate if you ate this food. And some of the joint efforts there in Anaktuvuk showed that the highest levels of this cesium in humans was in women who were giving birth to children. But the women themselves, this would accumulate in their bone marrow. And there were two cases that were identified of the kinds of cancer that the only place where this had happened, and they were quite sure they had traced it to the cesium. That it was from the fallout. And that was -- It wasn't what Luick was working on, but he was working with these people. They had whole body counters that they had to fly in --

KAREN BREWSTER: Wasn't that Hanson? Was Hanson one of the guys?

DAVID KLEIN: It might have been. I can't remember the name.

KAREN BREWSTER: Yeah, I think.

DAVID KLEIN: So then, what Jack Luick found, too, was that wolves accumulated it because they kill caribou. So you could actually monitor the amount of caribou that wolves were killing by examining the wolves that were shot for wolf control or by hunters or trappers, and it would give you a clue as to how important caribou were in the diet of wolves. And some wolves in some areas like the Porcupine Herd, that's part Alaskan and part Canadian, that herd there was -- In the wintering grounds, definitely the wolves were eating a lot of caribou. But then once migration started up, there was very little use of the caribou during migration by the caribou, and the calving grounds while they were still eating some lichens.

KAREN BREWSTER: So this exchange. So Jack went on this '74 exchange with you and who else?

DAVID KLEIN: Okay, then Jim Hemming, he worked with caribou for the Alaska Department of Fish and Game. And he had been -- he was sort of a senior biologist, had worked a lot with the Nelchina Caribou Herd, and done work on lichen forage and in the Nelchina area in relationship to caribou. So it was the three of us and so we went --

KAREN BREWSTER: Now for this exchange, did you have to go apply to the federal government and the state department to go do this, or how did you get selected?

DAVID KLEIN: Technically, yes, but we were encouraged and recommended. Us three were recommended to go once it was decided to send a team over. So Jack Luick was the first contact, and then he recommended that I go, and then we recommended that the state people should -- someone representing the state and the caribou work they were doing. So the three of us were sort of the best choices for that. And then we worked as a team. And then the state department handled getting us official passports and going through all of the screening and everything that had to be done.

KAREN BREWSTER: And so were you guys selected because somebody, I don't know who decided, they wanted to do research about caribou? How was that decided?

DAVID KLEIN: That was decided by -- probably some input from us, the University of Alaska, about, in the early stages when you're just talking about possible exchanges, what areas did we have the expertise that would be of importance from the Soviet side and vice versa. And it was general agreement it would be caribou/reindeer. And on that side, yeah, they wanted -- they felt there was a lot that could be learned from us and we felt there was a lot we could learn from them. We had some common interests that related to like -- reindeer is always of more interest in the veterinarian perspective. You know, what kind of parasites do they have on both sides? What kind of diseases and how are they treated? Brucellosis was a key one. And one of the Soviet scientists involved was head of an institute in the Taymyr region called -- translated to English, Institute of Northern Agricultural Research. But then included also working with wild caribou as well as domestic reindeer. And brucellosis was his area of specialty. And that was a problem in domestic reindeer and how kind of drugs and how to treat it and how to keep it down at low levels within a herd. And there was still a lot to be learned about the kind of brucellosis. Was it the kind that's in dairy cattle? And there was ongoing research there and some here in North America, too, in Canada and Alaska. So we could -- each side could gain a lot by getting together but there's also -- like my interest was on the plant/animal relationship, so the winter forage and lichens, as well as the summer forage. And this Norilsk area is where they have this world's largest nickel metal processing place, nickel and many other metals. So it was a huge metallurgical complex that was built -- a city of 300,000 was built, starting after the discovery of the ores in 1930's. And it was like the architecture was supposed to be similar to St. Petersburg, at that time was called Leningrad. And so --

KAREN BREWSTER: So you three from UAF, you went over to the Soviet Union?

DAVID KLEIN: We went over. And according to the agreement, the host country provided translators. But we had one person accompanying us who was fluent in Russian and he worked for the State Department on these exchanges. And he was someone who looked a lot like John Tichotsky and really nice guy. So he was there, and then once we got over there we were assigned a Russian interpreter who it turned out was not Russian, he was Latvian, but he was working in Russia. And he was -- served their interest well, but he was much more outspoken, freely outspoken, once we got away from the European/Russia/Kremlin. But cautious nevertheless.

KAREN BREWSTER: So what time of year was it that you went over?

DAVID KLEIN: That was in the fall. It was in September sometime. Before snowfall but it was in the frosty nights sometimes, so it was in the fall. And, of course, it was a learning process for us. And it was not without a lot of frustrations because everything that was supposed to be done and organized for them, by the Russians, by the Soviets, it wasn't ready so we sat around in Moscow waiting for visas for us to travel there to be processed, and that was frustrating for everybody involved, but it turned out to be standard even in later years. And then -- because it was a new program was one of the reasons.

KAREN BREWSTER: And you were traveling to remote places?

DAVID KLEIN: We were traveling a long flight from Moscow to Norilsk. And then, this was a sensitive area, had been part of the Gulag archipelago, so a lot of the building of the city and the mines, operation of the mines, and to some extent also was done by political dissidents who were shipped out there and were prisoners, lived in prison camps, barb-wired, enclosed camps with minimal living quarters. And they were worked -- their butts were worked off by building new buildings and what, which weren't built according to standards sometimes deliberately by these workers. For example, they thought -- the Soviets thought, that were supervising this, thought that you could just go on laying bricks at very cold temperatures so that the mortar froze instead of setting properly. A massive amount of -- For the foundations and stuff, usually you didn't have that problem with pouring reinforced and what. But this brick -- so then within a few years the bricks would just fall down because the mortar was like using mud instead of mortar. There's some books, One Day in the Life of Ivan Denisovich.

KAREN BREWSTER: Denisovich, yeah.

DAVID KLEIN: Which was a --

KAREN BREWSTER: By Solzhenitsyn right?

DAVID KLEIN: By Solzhenitsyn. That was -- the setting there was Norilsk for him. And so it's interesting because it tells about the life of being one of those persons in one of those work camps and how people survived, but just barely so.

KAREN BREWSTER: So when you were there in 1974, was it still active as a prison camp?

DAVID KLEIN: No, they had -- that was -- who that's first -- Vaskin no. Who was the premier after Brezhnev, that was the one that with the standoff with Reagan?

KAREN BREWSTER: Gorbachev, no.

DAVID KLEIN: No, it was --

KAREN BREWSTER: Somebody in between?

DAVID KLEIN: Yeah, the one that had been a sort of come up from being a peon and farmer, but he was a pretty powerful guy.

KAREN BREWSTER: I can't think that there was one between Brezhnev and Gorbachev.

DAVID KLEIN: Yeah, there was. I think there were more than one, but I'll think of it. At any rate --

KAREN BREWSTER: So they were longer, it was no longer part of the Gulag when you were there?

DAVID KLEIN: He was this fellow that came in there and stopped the Gulag. Right. But the buildings were still there, the compounds, and when we were -- You had to fly to this airport, which was like about 40 kilometers away from Norilsk, it was midway between Norilsk and the river port where the processed ore went by electrified railroad. And we -- I remember when we were on the train going to -- from the airport going to Norilsk we went by one of these deals where there was a defunct coal mine, not a very big one because there wasn't much of a vein there. But where there's this fence, barbed wire and watch towers, and I said, "Well, what's that?" And the interpreter, this Latvian guy, he didn't ask that question to the Soviet, "What's that?" He talked about something -- they were talking about something else and so he then told me later when he was with us in the hotel room, I think, that the reason he didn't pass that on is because you're asking a question that probably they didn't want you to ask and that was about -- that had been part of the Gulag. Once you got into town then there was a big section that was left over. It was boarded up, but the watch towers were there and they didn't actually -- then we had these official meetings where we all sat down together and they told all about the city and the wonderful construction and what a wonderful place it was and how did they do this. And Norilsk is 69° north so that's like about Umiat, so it's right at the edge of the tundra. And it was obvious that there was a lot of damage to vegetation from the air

pollution from the -- on the downwind plume of this pollution. And we were told that we could take no pictures of any of this stuff while we were there. Although, if they were with you and you wanted to take a picture of the statue of Lenin or a new -- one of these big apartment complexes, when they were with you on a walking tour around the city, they would let you take these pictures, but they didn't want you to take other pictures. One time I tried to take a picture of a horse pulling a cart, two-wheeled cart with one guy doing it, and I thought it was rather strange, the horse here pulling the cart in the Arctic. And they didn't want me to take a picture of that. They would let me take pictures of automobiles and buses, but not things like that. Well, Jim Hemming and I woke up early the next morning. It was a long flight and we were tired but we got a good night's sleep, I guess, and were also excited to get out, and Jack Luick was still asleep. So we got up and they weren't due to come and pick us up to take us to breakfast at a restaurant. So we went out for a walk with our cameras and we were taking some pictures we probably shouldn't have because if anything went wrong and they got the cameras, they'd see that we were taking pictures of the pollution. I was interested in the pollution and how it affected the vegetation and especially the lichens and especially trees. It didn't have so much effect on sedges, but on broad leaf plants like willows and on -- larch was the only forest tree there. They were skeletons that were mostly all -- that had been killed over a few years, several years of pollution. So at any rate, then we -- took us out into the field and so they wanted to show us this model reindeer herd. So they took us out with the -- we learned later there was -- we could have gone with these military tracked vehicles that were suitable for going over the tundra, except they damaged it badly. They had trails that were -- tried to keep people on the trails but they were doing a lot of damage to the tundra with them. We could have gone directly from the city, but they didn't want us to go through this industrialized part of the edges of the city, so they took us by train out, back toward the airport and then we were met there by these tracked vehicles. And they just took off where there was no existing trail, damaging more vegetation, and headed out and we finally, after 20 miles, we connected with the main trail. But we could see a lot of damage to the vegetation. Once we were out there we were taking pictures, nobody complained but we didn't have -- As far as we could tell, there were no spies on us, spying on us once we got there because the people we went with were people working the -- they were biologists and veterinarians. And then they set up a -- with this model camp, they'd set up some big tents so that we could stay there and they could have tables inside and we could all have dinner together, including the herders. And the herders were indigenous people and one or two of the -- one of the biologists that was working with us, one of three was -- Well, there were like two working with the reindeer and then there was one wild reindeer, or caribou biologist. They were all scientists. And then there was -- But one of those biologists working with the reindeer was an indigenous person who had gone to the university and got the training. And he was -- my impression was that he was one of the well trained, best trained people and a good scientist, and he was appreciated as such.

KAREN BREWSTER: So you got to spend time with other scientists and talk about caribou and reindeer?

DAVID KLEIN: We did it usually in a group, in groups. Like they'd take us to see the -- Well, we got to this camp that they'd set up where the model herd was grazing in that area. In the process of getting there we got lost. And at first they didn't want to acknowledge that they were lost, and they probably were told that they shouldn't show us the maps of the area. But once they got lost then we'd get out of the vehicles, which were kind of cramped because we had all of our gear stuffed in there and other gear. And I think we had two of those vehicles. And we could go across rivers and stuff. We were breaking trail to get to this camp and so presumably they were using compasses and a map, but when they rolled these maps out on the tundra it was unbelievable. I'm sure we had better maps of the area from satellite imagery, but I could see why they were having problems. So we got lost and we didn't get to the camp that evening so we had to camp out, which was interesting. But it was -- they were game people and they rigged up a tarp and had some cots, folding cots for us to use in the camp. And they had sleeping bags made out of animal skins and they were -- they weren't really caribou. I don't know what they were.

KAREN BREWSTER: They weren't reindeer?

DAVID KLEIN: No, they might have been -- they could have been poorly haired bear or maybe coyote, something comparable to coyote or something. They weren't as warm as they could have been and it was a frosty night. But there was a lot of -- we had a nice fire and it was a nice, beautiful location right on the edge of a ravine with larch forest down in the ravine, and then some alders and tundra with lichens on the ground. And they had food. And there was one wife of one of the biologists, one of the senior biologists, and she would volunteer to come on the trip and she said she would be willing to be cook, so that was a good deal for them. And she was a nice woman. And she livened up, having a woman there livened up things a bit. She was an attractive woman. And so then we -- the next day we -- and surprisingly, they didn't want to radio in and say they were lost. And in some places they may not have been in radio contact, but they explained to us that if they did then they would -- if they had to send out helicopters or something, that might be the end of this whole expedition. And they figured they could find it the next day, probably. And, of course it was -- sometimes it was foggy, so it was hard to see things. But at any rate, the next day we took off and spent most of the day going in some directions and not finding anything and going in another direction and not finding anything. And finally, it was getting late in the day and we thought we were going to have to spend another night out. Fortunately, they had plenty of fuel, extra fuel for the vehicles. And then when it got dark enough, suddenly we saw a fire in the distance and it was a fire deliberately set so that we'd have something to see to get there by the people at the reindeer camp. So we made it into the camp that night and stayed there for several days. We were plagued a lot by the fog. In fact, when they were due to pick us up, we had to wait a day and a half because of the fog. It was too much fog for the big helicopters to come and pick us up, just us because the camp obviously was going to stay there. But it was a good experience in seeing how they were handling the reindeer. They used sleds on the -- with steel runners in the summertime and then they could go right over the tundra and rocky streams, sparks flying. But the sleds were tough and the reindeer, the draft reindeer, were great at running at full speed over rocky terrain or tussocky tundra. It's

unbelievable. They had some dogs that were well trained. And it was interesting to see them, how they worked, used those to keep the animals from straying off, mainly. But, you know, we examined animals. They slaughtered one for our use, we barbequed some of the reindeer, and it was excellent food. They put out a net in a lake, small lake, and caught whitefish, so we had good food plus the food that -- they had plenty of food there. And there was some good -- I learned a lot and there was some good exchanges of learning and how we do things, and a lot about veterinarian handling and what they did, how they castrated some animals, and how they treated for brucellosis on animals whenever they handled them and showed that. And they were experimenting then with ways to reduce the warbler and bot fly parasites, which later on they had made good progress along with the Scandinavians.

So then one of the interesting things that happened -- the dinners were very -- in the evening, were really nice deals and they had big folding tables in the tent, and so all of the -- or most of the reindeer herders would join us. And so we had -- then the interpreters, including our own, all worked together so we could have good conversations. And from everything. The herders, of course, were interested in us and how life -- we lived in Alaska and there was no political talk at all. And frankly, none of us really wanted to talk about politics, we wanted to talk about the whole operation and how they did it, etc., and what we knew and how it compared to our operation. So it was productive. And, of course, there was plenty of alcohol. And we bought a few bottles, which were quickly drained. They were very popular like American whiskey and things like that, but they had plenty of vodka. And Jack Luick -- they would have always, except for breakfast, they would have vodka first thing as you sit down, 'cause the lunch was cooked stuff and was fish or reindeer or what. And she had some help from her husband or somebody else when she was cooking so it wasn't all on her shoulders, but she did a great job of Russian type food, and boiled cabbage and potatoes and lots of fairly good food and a little extra because we had this international deal. We'd have these toasts with a small glass, and, of course, you would have a toast with it and you were supposed to drink it all at once. That's sort of a macho, Russian male, Russian procedure. Women could opt out and have juice or something instead. But they didn't want any of us. And if you only drank half of it, then they would -- essentially you've got to drink it up and then they'd fill it up again anyway. And so after a while -- and they had all these -- they were sorting -- when they were getting ready for dinner, and they're sometimes sorting in these cardboard boxes, which they had all the food and everything in, and the vodka. And they'd always be able to reach in there and grab a bottle of vodka and bring it out. So then when we were fogged in, Jack Luick says, or even before that, Jack Luick says, "Well, aren't you afraid you're going to run out of vodka?" And they said, "Nyet, nyet. No problem."

KAREN BREWSTER: Never. Never run out of vodka.

DAVID KLEIN: So, it turned out they did. And so there was no problem. So then what they planned to do was to take -- they had plenty of alcohol for specimens. This was lab alcohol, which is 100%. So you watered that down to make it about the same as vodka. So they took -- they had plenty of empty vodka bottles, and so they'd put this, about half of this stuff in. But even before they got there, they were out there and these vodka



bottles, these bottles that had the fuel in were empty vodka bottles. And not labeled. And, of course, they had fuel for cooking. They used the other kind of alcohol, or they used gasoline for cooking. And so they would pull these bottles out and they couldn't tell for sure whether it was the drinking alcohol, or the specimen alcohol rather, versus the gasoline. And so here the tent had no floor in so it was just the ground there and they would be down on their hands and knees. The guys were usually doing this not the woman. And they'd take one of these bottles and they'd pull the cork off and they'd smell it, "Nyet." And put the cork on. And then they'd get another one out and "Nyet." And then there'd be a disagreement, so they'd pour some. Now it was cool so there wasn't a lot of vapors coming off. Pour some on the ground and light it and you know it phoo [makes a noise]. "Nyet, nyet." It was gasoline. So then they finally poured some on the ground and lit it and it was a nice little blue flame and said, "Da, da." So then they poured about half of this in the empty vodka bottle and water from the lake in the other half, and set those on the table. So this was delayed dinner, and there was some hot cooked fried fish or something like that on the table and Jack Luick kept saying, "Well, why don't we get started before this cools off?" And they said, "No, no, you never do that. We had to have vodka first." And we didn't have any other alcohol. It was all gone. And so it was this watered down lab alcohol. And the bottles were sitting on the table and Jack -- and still nobody was pouring it and were talking and what. And the food was getting cold, and Jack says, "Well," and he started to reach for the bottle. He says, "Well, let's pour the vodka." And this one biologist who worked with the domestic reindeer, a terrific guy, he said, "No, nyet." He took a knife and hit the bottle and it went clunk. And "Nyet." And so it was a little confusing for Jack. And so another two or three minutes he picked up the knife, hit the bottle and he went *ding*. "Da" So then they poured it.

KAREN BREWSTER: Oh it had to --

DAVID KLEIN: Mix.

KAREN BREWSTER: Mix.

DAVID KLEIN: Exactly. And then he showed, again, you could see when it was mixing, you could see these currents in there where the alcohol is mixing with the water. And it's pretty obvious if it's clear glass to see that. At any rate, so we had our [inaudible@45:19] of vodka and we carried on for the rest of the time we were there. Survived. It wasn't the greatest stuff. So that was one of the humorous things.

KAREN BREWSTER: Desperate times mean desperate measures.

DAVID KLEIN: Yeah. They were concerned about cooking the ribs of the reindeer, so they're all hooked on this gasoline stove in the tent and it's going to take a long time, you've got to use the burner for other things. And it was one of us that said, "Well, why don't you -- We see if we can find some wood and barbeque this?" So they hadn't thought about the possibility of barbequing the ribs of the reindeer. It didn't look like there was much wood around, but there was alders, scattered alders mainly there and maybe -- there weren't any larch trees. And there was some willows and some of them

were pretty good size. And we went around and. yeah, there were quite a bit of wood. This big maybe most.

KAREN BREWSTER: Three inches, four inches around?

DAVID KLEIN: No, smaller.

KAREN BREWSTER: Two to three inches?

DAVID KLEIN: Yeah. It was obvious we could do it and once they got into it, they were all excited and we all just scattered out and started -- and we brought it back and we had plenty. Plus they found a couple of palettes where they'd had some stuff brought in by helicopter and they didn't need them and we used that wood from the palette, which was oak or something, it was hard stuff, good. So we barbequed, and that was nice because we could be outside and all of us. And these guys were all chain smokers, so being outside was nice. Even in the tent, it was airy, but not that airy when everybody was smoking. All the herders, everybody smoked, it seemed like. So at any rate, we enjoyed that and could help fishing. They used as a gill net, although somebody tried with the lures and I don't know if they caught anything or not.

So it was a good deal. And then they finally -- the fog lifted enough they got a helicopter out and took us back to the town. And then we got out to other places and we were interested in the -- I was particularly interested -- they had a -- this all related somewhat to the Gulag because initially they used coal and then the pollution was even worse when they were using coal. But then they discovered natural gas about a couple hundred miles away, and so they built a pipeline about the same diameter as the Trans-Alaska Pipeline. And they built a pipeline to Norilsk and we'd heard about this a bit, and it had -- it was just laid on like railroad ties on the ground. And so it was an obstruction to the movement of the caribou, the wild caribou. And the wild caribou moves through that area during migration and so then there were a few places where they could get over it, or under it when it went across a ravine or something, it would be sort of suspended and they could go down into the ravine and could get around it. But with a big migration -- this was a huge herd, at that time it was a couple hundred thousand and it got even bigger later on. So then they had -- they tried some special deals to get caribou over it by raising it fairly high so that they could go under it without any trouble. But they didn't use it very well, they stayed away from it, they wouldn't get that close to find out that they could get under it. And then they built lead fences to try to get them to go to these places where they could get under it, or where there was a ravine they could get under it. Then they tried building some gravel ramps over the pipeline. And again they did some elaborate deals with wooden bridges and then wide bridges and then put gravel on it so it was sort of the same as the gravel in the approach to the deal and it was areas where there was gravel on the soil.

KAREN BREWSTER: Was that successful?

DAVID KLEIN: None of them were very -- They could get animals to cross but not -- In the worst case scenarios they would just mill around and trample and overgraze the areas

and so they weren't getting food. And then another approach, some of them tried to move laterally and move long distances and then maybe have gone off into new wintering areas. This was when they were coming from the spring migration -- during the -- back from -- in the fall migration coming back to the winter ranges. So at any rate we wanted to see these, mainly the pipeline then, they hadn't experimented much with the ramps then. And we were already doing studies relative to the Trans-Alaska Pipeline, which was -- they were going to -- originally they said they were just going to lay it on the ground, and they finally changed that. The engineer said, "No, that's not going to work, period." So there were big differences, but the best success they had was building lead fences that would direct them, instead of toward these areas where the pipeline was, a way, at an angle, into a new wintering ground that actually was a good place for them to go to because it had previously been domestic reindeer herding area. But once they collectivized their reindeer herding, it had been abandoned by the people that were in these remote areas and had reindeer. And so the ranges were lush with lichens and good areas for them to winter. But they couldn't get across under this pipeline or over it successfully, so they ended up abandoning the wintering area that was on the other side of this major river. And so the effect was that the pipeline prevented them from the traditional movements and directed them into a new area, which was adequate for the population to continue to grow and increase. And so it was sort of by accident after the fact that they -- the problem was minimized. And it turns out that it was probably just as well because once they got to the river -- this big river they had to cross in the winter, if they didn't get there -- ideally they would get there when they get to swim across the river. But if there was ice forming, it wouldn't get solid enough for them to go across on the ice because the ships were -- It was a river port and big ships were going several, two or three a day, and they kept it from freezing up all winter long. So that meant the river was flowing still, you've got this churning ice, which made it very difficult or almost impossible for reindeer, or caribou, to swim across this channel because of the floating ice and then getting back up on the ice ledges on either bank that existed there. We learned about these things. We had good connections with them after the exchange. And we kept in touch, and we provided sometimes publications that they weren't aware of. And they hired a new librarian who would translate a lot of stuff into Russian from English and some -- she could do a little bit the other way and sometimes they'd send stuff to us, but we didn't have the same problem that they had. And they just -- their library just didn't have a good English publication. There was a lot of good stuff from Scandinavia that they didn't have because it was published in English. And it didn't do any good if it was in Scandinavian, as well.

KAREN BREWSTER: So did they -- So you went over there and spent this time. Did those same Russian scientists then come to the U.S.?

DAVID KLEIN: Yes. In several ways. I mean, sometimes we would -- we facilitated some of them, not the same ones but some of the same ones, not the same group but some of the same ones to come over. And then I was responsible then mainly for organizing that visit. And so we got -- since it was done through the State Department, we got a commitment to make a Twin Otter that belonged to the Bureau of Land Management available for us. We flew commercially to Nome with them, and then they flew us around

to places like Shishmaref, and some of the villages where they had reindeer herds. And that was interesting, too. And Shishmaref there was -- we had a party including the pilots and interpreters. We had to provide the translators and -- but they had -- seemed like they had one of their own they brought along. But we had this woman interpreter who was provided and was originally Russian, but she was very attractive and so she got along well with their institute director from Norilsk. She kind of took care of him. He was very uptight about the exchange, whereas the other biologists were -- he was a loyal party person whereas the other biologists were just good scientists. And he was a good scientist, too, but he was a loyal party guy. So then we spent one night in Nome, which was, wow, that was an eye opening for him with the bars and Natives. It was not a very nice thing to show them drunken Natives in the bars, but they experienced it. And this one guy, his name was Mukacheve [sp? 58:58:05] and he worked with the domestic reindeer. He was just always thoughtful, life of the party, and he was a big, husky guy. And in the bar in Nome, of course, they word was out that these Russians were visiting along with us from Fairbanks and other places in Alaska. And occasionally a drunk Native would come over and try to introduce themselves. And it was mostly handled okay but some -- there was one, they were challenging one another at the table, the drunken Natives to do arm wrestling. So then they wanted to challenge someone, Russians, and this Russian Mukacheve [sp?] was a mountain climber and a real athlete. A big husky guy. They challenged him. Well, of course, that was fine. And none of them could even begin to match his strength. Of course, they were drunk and he wasn't. But it was interesting. And finally, the institute director, he was head of the Russian delegation, said we probably should all go to the hotel and go to bed and not stay here until we all get drunk or something. He didn't say that. He wouldn't have gotten drunk, he wasn't drinking much. And so we went back to the hotel and it was pretty late and we'd a lot to drink. And Jack Luick was a good drinker, and so were some of the other Americans. So we thought everybody was gone to bed and pretty soon there's a tap on the door and it's Mukacheve [sp?], and he's down into his tee shirt on now. You didn't have to have a tie and anything, he's got a tee shirt on or an undershirt and trousers, but it was like bedroom trousers. And he had a bottle of vodka and had all this food that they'd brought in suitcases and stuff. It was amazing. And it was like canned caviar and fish and other just really nice Russian stuff. Some Russian black bread. And he had that in this big huge suitcase and brought it out and we had our party in my room. And Jack and others joined this. But he was just such a party guy. And so you couldn't help but like the guy. He was just a fun guy. But unfortunately, they also learned another thing about -- Well, first I should mention in Shishmaref we were spread around through the store and houses -- we had brought along air mattresses and sleeping bags to be sure everybody had -- the head of the party, this party guy and institute director, ended up he and I and one or two others were in the church, the preacher said, "Yeah, yeah, go ahead and sleep in between the pews." So we were doing this and he thought, they'll never believe this when I go back to Russia that they slept in a Christian church. And he saw it as a joke, you know, but I can imagine since churches were not condoned by the Soviets. At any rate, that was interesting there. But there was a good interaction there with a local guy, with a head reindeer herder. And he really appreciated that they were there and they appreciated to be able to talk with him. And he was a good reindeer herder, so that was -- and we got to see

his animals and what. Some of his animals and his corrals, and how he handled them, and that was good.

Well, back in Nome, after this night at the bars, the next morning we had a meeting at ten o'clock in the morning. Well, ten o'clock is early for Native people, and so all of the Native officials were -- nobody showed up at ten o'clock. And the worst case, nobody -- one of the Fish and Game guy had had so much to drink that he was also late getting there. Well, we couldn't start the meeting, so we didn't do the meeting until later. And it was more of a formality, anyway. But we finally did it without a full complement of the Natives, but this was part of life in rural Alaska at that time, for sure.

KAREN BREWSTER: And what year would this have been?

DAVID KLEIN: That would have been about '77 or something like that. Then another time, on one of the exchanges there was an international reindeer/caribou symposium in Whitehorse. So we were able to tie in with that, and these people could come and get to go to Canada, too, as well as Alaska, to Whitehorse at any rate. And so Mukacheve [sp?] and I think the institute director came, too, and a couple of others. And a woman, who now had been a translator when I went back in -- that was later after the third one, yeah. But she was now a biologist. She had been studying so she was able to come over and attend. And I forget what we did because there was a connection earlier before that with Russia and aq different Russian biologist to get an exchange to get some of our muskoxen from Nunivak Island that they wanted to re-establish muskoxen in the Taymyr Region. And sort of like muskoxen were first brought to Alaska that they wanted them to -- here in Alaska to re-establish them in the wild, where they had been. Whereas in the Taymyr, they had been in the wild but not -- it was about a thousand years since the last one had been known. So they were there, but they died out for maybe some similar reasons but some different reasons, too. So there were -- in 1989 was the third exchange and Gorbachev was in power then. And so, wow, it was so different when we went there then. It was still not that organized. The second one, I should point out about the second one.

The second one, I was going over alone to look at caribou because we didn't get much focus on caribou. It was mostly domestic reindeer the first one. So that was in '76, I guess. So I went there alone to Moscow, but at the same time there was another exchange going on under the same program and that was a botanist, who I knew, Pat Weber, who was based, at that time -- he was Canadian first, and then he was at Boulder at that time. He was an expert on Arctic vegetation, and so he was going on a similar exchange and so we were both there at the same time in Moscow. And each of us had been assigned an interpreter, woman interpreter, and he had been assigned this woman who later became a biologist from in Norilsk area. And I was assigned a woman, an older Russian woman, who lived in Moscow most all of her life. And so when we realized that we were both having problems with the Soviet system -- Even though it was becoming liberal, it was still not efficient and you had to go in long lines and this was -- the interpreters had to front for you, these long lines to get visas. And it was frustrating because you'd be in a long line and then finally get to the window and the woman say -- there were people in those windows were never courteous. They would say, "This is the wrong line." And the interpreter was -- they were talking to the interpreter, a Russian from Moscow, and she

would say, "Well, where is the line?" "That's not my job!" I mean it was that kind of stupid mentality. All of this is in Russian so I wouldn't hear it. And by persistence, "Well, it may be on the other side." So what do you do? Stand in line until you find one, because there were lines going in this -- So stupid. At any rate, the interpreter I had was -- she was a very nice, charming woman who -- she hated the system. And so what finally was decided was let's join these two expeditions and go together, 'cause he was interested in vegetation where the reindeer -- where the caribou were and so was I. But I was coming from the caribou standpoint and the vegetation, well, I was interested in both. And the idea of putting it together was great, we thought, and so did the Russians, finally. So we ended up having two -- the two interpreters stayed with us, which was good because this woman from Moscow, she was a better interpreter. But the one who later became a biologist, she knew the terminology for the caribou and vegetation in that region better. And at first, they were pretty competitive at interpreting. She was very attractive, and the one I had was not, but she was very nice. She was already getting big, like Russian women tend to do, whereas the other one was sort of -- and she wore the latest fashions and stuff. And when Russian women were slender and attractive, they always had really nice, fashionable clothes on, high heels and all that kind of stuff. Any rate, we were lucky to have them both there. And especially then they flew us out to show us this wintering range of the caribou that hadn't been used very much but it was where caribou had been defected to. And it was a fabulous place. It was a place that became a national park. And it had these -- it was like western U.S. where you have a lot of lava plateaus and then waterfalls coming down off the top. And big lakes in the valley. And the valleys were -- the lakes and the streams in the valley that were coming out of the Arctic Ocean, had terrific big char, Arctic char. And the lakes were pristine lakes. And there'd be larch forests down in the valley bottoms. And then there'd be sometimes steps as you go up from one lava layer up to another to the flat top. And there were some of these benches, I mean, the lichens were so rich. So Pat and I did some estimating lichen growth and we published a short paper jointly after we came back on that. But they flew us out there with the big helicopters and that was a nice camping trip. Pat and I had individual tents that they provided for us, and they had tents for themselves, and they had a cooking tent where we could all be together. And then they had a beautiful, young grad student who had volunteered and she volunteered to take responsibility for cooking. Of course, she could get help from the women translators or anybody else if they asked because she was just a beautiful, young woman. And so then we did some nice hikes and this was an area that had had domestic reindeer herders. These were the very indigenous people that were isolated and they were forced -- they wanted to stay isolated but they were forced to collectivize. Well, then they would be provided schools and medical care, which they didn't have when they were living out there. And they were living on their reindeer and these lakes were key places for fishing and that they fished a lot. And, oh, it was a fabulous place because you could find -- I've got wonderful slides I took. But you'd find old skis that they made which were sort of like snowshoes. They were made out of -- you could just carve it out of a larch log and an axe and then you could tack, or tie, a moose skin or reindeer, but mostly a moose. They liked moose because they would take the skin of the leg and put it down where the hair's leaning back and so you wouldn't slide back if you were going uphill.

KAREN BREWSTER: So they made skins for the skis?

DAVID KLEIN: Exactly. Permanent. And they still do that in parts of Russia and other areas. But you'd find some of these and then you'd find old runners of sleds. And then they always would say, well, if we'd been on a long hike or something, "Well, you're tired, we'll take a break." And then while all of us -- and the guys then would go out and check -- there was subsistence fishing with nets, so they would go out and check their nets and then if they got fish, they would dress them and salt them down and they'd take that home afterwards. And there'd be helicopters so they'd have nice char.

KAREN BREWSTER: So were you accompanied on this trip by some Russian, or Soviet scientists?

DAVID KLEIN: Yeah.

KAREN BREWSTER: Okay.

DAVID KLEIN: They were some of the same ones. The institute director was there and one of the other ones, yeah.

KAREN BREWSTER: Okay.

DAVID KLEIN: But they worked as a team doing this subsistence. And I had a fishing pole and a few lures and, oh, it was fabulous fishing there. And I hooked onto a big one with this one lure and the line wasn't strong enough or maybe I was too impatient. But I played it for quite a while and they were pulling. And they had a little inflatable boat and they saw all this action going on and they realized I had a big one. And then finally it got around a rock or something and the line broke. And so then they had their gill net out. That night they caught this fish with my lure in it, and it was the biggest char that they had caught.

KAREN BREWSTER: Like three feet long?

DAVID KLEIN: Yeah.

KAREN BREWSTER: Wow.

DAVID KLEIN: And so they said, "Look, look what we found, it's your lure. So you did have a big fish on. There's no question about it. No wonder it broke your line!" And they liked to fish with lures, too. They said, "The rule is here, that if you catch a fish and it has somebody else's lure in it, you get to keep the lure." And I said, "Good, you should keep it because it's a good one and I want you to be able to catch big fish with it." They were very happy over that.

KAREN BREWSTER: So did you get to eat that fish that night?

DAVID KLEIN: We ate some of it, yeah. We had wonderful -- We had a lot of char, no question. And they also stripped the eggs out and they salted them down and then wrapped them in something like plastic wrap and then the next day we'd have that as sort of lunch with bread and potatoes and stuff.

KAREN BREWSTER: Sounds good.

DAVID KLEIN: Great stuff.

KAREN BREWSTER: Yeah. So on both of these two exchanges you've been talking about, how long were you in the Soviet Union on each of them?

DAVID KLEIN: I think the longest was just short of month. I think that was the first one. Because we went -- after we were in Norilsk and been in the field, then we went to -- we flew with this academician who worked -- a specialist on lichens. He was with us -- we flew with him to Yakutsk, that's where he lived. And there we stayed for a couple of days and his wife was a well-educated PhD botanist and she was -- had started and was heading up a botanical garden there in the Yakutsk. And we spent -- stayed in a hotel and then we went out in the field with him. It was in the fall, you know, getting later, but it was impressive. We saw these, quite a few cars on the road, all the little ones loaded with people. And "Where were they doing, what are they doing?" They're all out blueberry- and mushroom-picking. So we went out and we were hiking through the woods and professor Andrev [sp?] was the lichen specialist, and he had a plastic bucket and he was continually reaching down and putting mushrooms into the bucket. He knew mushrooms very well. And this was a larch forest. And one time we met some people that were -- a family that they were picking stuff and they had been in one of these cars that had gone out there, and they had a bunch of blueberries and mushrooms, too. So then we go back and normally on these exchanges you never got in to see where these people lived. But since he was -- he became an academician I think a year later, and he was a very senior guy. He had been based in Leningrad at a botanical museum there for a while where he had done a lot of work. They allowed him to -- not bring us into his apartment, or have us in his apartment where he and his wife lived in Yakutsk, but they were -- he was one of the fortunate ones that he was able to buy a dacha, an old little house on the outskirts with a garden. And it was, oh, about half the size of this house, a little more than that maybe. And the kitchen floor there's this, you open it up and it was permafrost underneath, and down there they could have all these blueberry preserves. They didn't use sugar, they used sugar but they didn't can stuff, they just kept it semi-frozen down there. And then we had -- they put on this wonderful meal with the mushrooms cooked up. And we were able to eat outside in the garden on a table, and it was just beautiful fall weather, but the evenings it would get a little cool by the end of the evening but it was just ideal, it was wonderful. And they had, you know, they had a big spread and they probably fished and a lot of vegetables that they had grown themselves and cooked up in Russian ways. And so it was wonderful, they were wonderful people and we had -- That was the highlight of our visit there.



KAREN BREWSTER: Yeah, so that was the first one. So you went to Norilsk, Yakutsk, and anywhere else or after Yakutsk, you came home?

DAVID KLEIN: No, let's see was that --

KAREN BREWSTER: You said you thought it was about a month-long trip.

DAVID KLEIN: Right. I think we were able to get permission to -- instead of going all the way back to -- Yeah, instead of going all the way back from Yakutsk to Moscow to fly back to New York then to Alaska didn't make sense.

KAREN BREWSTER: Right.

DAVID KLEIN: And we had to petition the State Department and the Russian, the Soviet government, and they finally agreed to let us. Normally, they would want you to go back through Moscow, but they let us go to -- what is it Komsomolsk? Yeah, which is on the Amur River, I think. So it's not far from the Pacific coast. And then they had just started flights a year or so earlier jointly Aeroflot and Japan Airlines. So I don't know how many flights a week, but half of the flights were with Aeroflot and half with Japan Airlines. Fortunately, we were with Japan Airlines that we were leaving with. And then we flew to Niigata. You know where that is?

KAREN BREWSTER: No.

DAVID KLEIN: It's on the opposite side from Tokyo on the big island of Japan. So then we took the train -- we stayed in a hotel there that night, and it's a really beautiful, small, relatively small, nice Japanese city. We had a wonderful food there. And took the train the next day to Tokyo. And then we took the flight back to Anchorage. And so that was a nice way to come home.

KAREN BREWSTER: So what was the name of the place in the Soviet Union on the Amur River?

DAVID KLEIN: Komsomolsk.

KAREN BREWSTER: Komsomolsk.

DAVID KLEIN: But leaving was difficult. We'd been there, yeah, it was about a month. And so they were really uptight about taking any Russian money back with you. And if you had any American money it was all supposed to be counted in Moscow when you arrived and you filled out a form and you had to have all of that when you left or not, you had to account for any that you spent. You exchanged them for rubles. You had to account for all of that because you weren't supposed to be taking too much money back or leaving.

KAREN BREWSTER: They were afraid you were giving U.S. dollars to Russian citizens probably.

DAVID KLEIN: They didn't know, but they can figure out all kinds of ways that this shouldn't happen. And they want you to be -- they don't want you to be doing black market, so you could get more rubles for a dollar if you use the black market. So you're supposed to use official exchanges. And, of course, they were strict on some things you weren't supposed to take out. So then when we got to the airport, I mean, man, there were so many soldiers all over the place. Oh, see that saddle?

KAREN BREWSTER: Oh, yeah.

DAVID KLEIN: That's a reindeer --

KAREN BREWSTER: A reindeer saddle? Is it made out of bone?

DAVID KLEIN: Wood.

KAREN BREWSTER: Wood, okay.

DAVID KLEIN: I found that in driftwood on this big beautiful lake where there hadn't been any Native people for a long time, but this was up in high and dry in the driftwood. And so I thought, "Wow, I'd like to have that as a souvenir but how am I going to get that thing back?" So the Russians there with me said, "I doubt if Russia will let you take that out." But at any rate I took and I took it apart. It was some rusty nails that held it together. I pulled it apart and put them flat on the bottom of my suitcase, and I was able to take that out. Also, it was after the CITES legislation so had been given this beautiful carved caribou, or was it two, I think, two carved caribou bulls on a deal.

KAREN BREWSTER: Made out of ivory?

DAVID KLEIN: Yeah, which was -- I didn't think about that. And was given several things that were made out of bone and maybe a few other little ivory things like small animals like ptarmigan and other things. And then I had collected in the Taymyr some vegetation, some twigs of willows and some dwarf birch and a couple other things, to compare with them here in Alaska. So I insisted that we had to air dry those in order to be able to bring them into another country. But technically you're supposed to have a permit from the Agriculture

Department to bring any animal forage into the country. And I figured -- I had to do that once with plant -- roe deer stuff from Denmark and it was a pain in the neck and this were in, in those days, in glass vials with stomach contents and stuff and I brought them back for analyses here. And it took me long after I needed it before they finally arrived. And one or two of the things had been broken. They were in a crate, so as not to break. At any rate, you had to have that permit. So at any rate, I got to Anchorage and it was a long flight and there weren't that many people to get off the plane --

KAREN BREWSTER: So you got out of the Soviet Union with all these items?

DAVID KLEIN: Yeah. They didn't care about --

KAREN BREWSTER: The ivory or the plants.

DAVID KLEIN: They didn't care about the ivory because they didn't know about it, probably the ones who gave them to me. And I didn't think about it.

KAREN BREWSTER: You just had them in your suitcase?

DAVID KLEIN: Yeah, along with some things made out of bone, some of the things I've got up here.

KAREN BREWSTER: Yeah.

DAVID KLEIN: Made out of bone and they -- And it was a good guy there when I -- at Anchorage at the immigrations when you're going through Customs and it was like wee hours in the morning like 2:30 or 3:00 in the morning. He says, "Well," and I tried to keep things light as possible but I had this sort of leather suitcase and, he says, "Well, what's in here? Any gifts?" And I said, "Yeah, they gave me some ivory." "Ivory?" "Yeah." "I want to see those." So I brought out all this stuff, and he says -- he was a good guy. He set across these ones that were obviously ivory, sat those over on one side and he says, "I don't think this is ivory, looks like bone." I said, "Yeah, it's probably bone. It looks like moose bone, but it's carved. They can carve things out." "Well, that's okay." He put down that one aside. And then he said, "It's illegal to bring this ivory into the country. So you have two options. If you want to fight this thing, it's against the law and so you're going to go to court and you're going to lose." He didn't actually say it that way, but it's a law and it's being enforced. "But," he said, "some of these, they may be bone, but we're going to want to examine them." So you have to sign this thing that you're agreeing that, with the law, that you realize it's breaking the law to bring any ivory into the country and that they're going to confiscate any ivory and we will check on these other things and return those that are not ivory to you. But you have to sign this statement saying I broke the law, etc., etc., etc., which I did. And the guy realized there was -- that it was tough for me because I was a scientist you know, and I told him all about the exchange and everything and I had been given this at a special banquet when we were leaving. He starts to put these things back, the ones that were obviously bone, wraps them all up and there's these little paper bags that are about that big. And he said, "What's this?" I said, "It's just dried specimens of grass and other things." "Agriculture?" And then he looked at me --

KAREN BREWSTER: You troublemaker.

DAVID KLEIN: I said, "They're all specially air dried specimens and they're to be used for scientific purposes." And he looked at me and he sort of took something and covered them up. Like dirty underwear or something. Covered them up and he closed up the bag

and he said, "We've given you a pretty tough time already." Said, "That's agriculture, you know, got to have a permit." That's why he covered them up. He let me go through with those.

KAREN BREWSTER: Oh, that's nice.

DAVID KLEN: So he was being reasonable.

KAREN BREWSTER: So you didn't get the ivory pieces back?

DAVID KLEIN: Well, I got --

KAREN BREWSTER: You got the bone pieces?

DAVID KLEIN: I got the bone pieces back, and I got the formal deal that said, in effect, "You still have the option to go to court if you want, but if you just sign this thing, it won't be on your record as opposing all this stuff." But technically you could be fined or something.

KAREN BREWSTER: Well, you know, as you say they were given to you at a banquet, you couldn't say no.

DAVID KLEIN: Well, the same thing happened to Governor Steve Cowper.

KAREN BREWSTER: Oh, yeah.

DAVID KLEIN: When he went on a short trip from Nome to Provideniya and it was an official thing and they gave him some ivory. They had flown up, it was a charter flight, and they had flown up the Customs and Immigration people to Nome from Anchorage. And so they went through his stuff and it was the Governor of Alaska, "Oh this is illegal." The same way. It was gifts.

KAREN BREWSTER: Yeah, you don't have a choice.

DAVID KLEIN: Right.

KAREN BREWSTER: And so the second trip, when you went out with Pat Weber, how long were you gone on that one?

DAVID KLEIN: That was about three weeks I think, 'cause we did get up into the summer calving area for the caribou, the big caribou herd. And that was really interesting. It was fabulous. It was a big lemming year and so there were lemmings all over the place. And as relative to the lemmings, there were a lot of nesting snowy owls. And you could hike up on a real ridge and there's a snowy owl's nest, and we could see from a distance, watch these male and female bring lemmings in. And here's a nest and these satiated -- and they have a large number -- they have twelve or thirteen chicks. And

here was this -- they were all not hungry at all when they got up there. And there around the nest were lemmings, and they just keep on bringing more lemmings in. So they probably had 100% survival. And Arctic foxes were denning and they were not hitting the nesting waterfowl like they normally do because of the abundance of lemmings. They go for what's easy. And this was a nesting area for endangered species of goose. It's a small, small goose, bigger than Brant and a little smaller than the smallest Canada goose. And it is called Red-breasted goose, and it's a really colorfully marked -- the males colorfully marked with a reddish color on -- streaks on the breast and stuff. And it's endangered in northern Europe. It was then, but it was just being given protection. But this was the nirvana because the foxes were hitting it pretty hard, but they don't -- when the lemmings were so abundant they didn't even bother with the geese. They tried to defend the nest.

KAREN BREWSTER: Right. So this was -- with Pat, then you went to two places? You went to the wintering range?

DAVID KLEIN: Yeah.

KAREN BREWSTER: And then you went to the summer calving area?

DAVID KLEIN: Right.

KAREN BREWSTER: Oh, those were separate places?

DAVID KLEIN: Yeah.

KAREN BREWSTER: Okay. And did you go anyplace else?

DAVID KLEIN: Not really. But we had this wonderful situation in Norilsk where we -- you go through the formalities soon after you get there, and it was good because we were together and we had similar interests. Some of our interests were the same and some were a little different, but mostly similar. One of the interests was when you fly -- well, you don't see it -- in a helicopter, yeah, you see it. You see all these greenhouses, this huge field of big greenhouses. Well, the greenhouses, and they tell you about this, they have all this waste heat from the metallurgical institute or factories, so they heat all these greenhouses year round and they grow food for the city. So there's fresh tomatoes and fresh green onions. Europeans aren't that big on lettuce, but they had some lettuce and cucumbers.

KAREN BREWSTER: So these greenhouses were out over the -- in the rural parts?

DAVID KLEIN: No, they were just part of the city.

KAREN BREWSTER: Oh, okay.

DAVID KLEIN: And so, in the initial meeting, they said, “Well, anything special you want to see in the area?” Both Pat and I said, “Yeah, the greenhouses. We’d really be interested in seeing those.” Well, they were happy to show us the greenhouses because here was something positive, it wasn’t the Gulag and it was where the Gulag had been. I should mention that that beautiful graduate student, she was the daughter of -- her father was shipped to the Gulag, and her mom went and lived in Norilsk. She wasn’t in the Gulag.

KAREN BREWSTER: But to be close by?

DAVID KLEIN: To be close by. And so she was a daughter of that.

KAREN BREWSTER: So when you and Pat went, you also based out of Norilsk?

DAVID KLEIN: Correct.

KAREN BREWSTER: And then went by helicopter someplace farther into the country?

DAVID KLEIN: But there -- so we went to the -- They arranged for us to visit the greenhouses. Well, it was beautiful weather, fall weather and --

KAREN BREWSTER: So you were there in the fall time the second time, as well?

DAVID KLEIN: It might have been a little earlier because it was really tee shirt, or short sleeved, beautiful sunny weather. And the greenhouse supervision was all senior women. But they were well trained, you know, university trained people. And, oh, they were so thrilled that here was -- that we from the U.S. and North America had been specifically -- that wasn’t part of the exchange agreement, but they were so thrilled that we had asked to -- So they met us and one of them might have had some -- could speak a little English, another one could understand some. But we had the interpreters with us and we did this tour, and they fell in love with Pat and me. And then here we are getting ready to go on that field trip into the mountains, and so this interpreter, who had grown up there, they started loading her with tomatoes, cucumbers to take out in the field, which was great. And then, you know, we’re walking along and here’s this low building and we said, “What’s that?” “Well, that’s where we grow mushrooms.” And so they showed us this and, “Well, what do you use as a base for growing the mushrooms?” “Well, horse manure.” And I said, “Well, we did see one or two horses around town, but is there that many horses?” “We have plenty of horses specifically to produce manure for the mushrooms.” So they had cattle in this institute and horses, and the horses primarily they had to pay so much for the horse manure, but it was produced there.

KAREN BREWSTER: That’s funny.

DAVID KLEIN: It is funny.

KAREN BREWSTER: To just have horses just for that.

DAVID KLEIN: So then they were showing us these mushrooms that they -- and they said, "These mushrooms are really super kind of mushrooms. They're so wonderful when you cook them up." And then, of course, they can always throw together something. And they threw together a little, I don't know whether they called it a lunch or what, but it was like a lunch. And since the women put it on. I think they had just a few of these mushrooms that they sautéed, but they didn't have any facilities to do much of this. And they had some of the fresh tomatoes and stuff, and they had found a few cans of something, and they did just a nice little in one of their office centers, right in amongst all these greenhouses. And then they said, well, they would volunteer, those women would volunteer to provide the mushrooms for the banquet when we left, the departing banquet, which would be out at a special place on the outskirts of town, which had good facilities. It was like one of the so-called many unions, recreation area, where there were some small lakes and playgrounds for kids and what. So we said, "Yeah." And the people from the Institute, the one there, I guess only one because they had seen these and said, "Yeah, we could probably team up. That would probably work out." So then they were part of the banquet, too, these women, who were just terrific women. And they made the parties. And the first course was these special mushrooms sautéed. They'd sautéed them and they were excellent. They were great. So Pat and I, we fell in love with these senior women who were so terrific and that was a real highlight of our visit there.

KAREN BREWSTER: That's great. But, so that does lead to the question, so both of these '74 and '76 exchanges, there was some formal banquets at the beginning and the end with you guys and the Soviet scientists or the local government or who?

DAVID KLIEN: There was always an official banquet, there was always someone there who was a party person. Now some of them may have been local, probably some were local, and some were -- come up from Moscow to be sure that we weren't spies or we weren't -- everything was on the up and up. And to be sure that the Soviet people, the biologists, were behaving and not giving away top secrets. There was always a paranoia that existed at that time. So then in '89 when we went -- then the key person -- there were two key persons, one was the muskox guy, biologist who I had met before. Now they had got the muskoxen, some from Canada but mostly from Alaska. In the Taymyr, they built a research station for muskoxen, working with the muskoxen or other things, but mainly it was the muskoxen on the outlet of this huge lake, Lake Taymyr. And again lots of char in the river. So then it was just me.

KAREN BREWSTER: So 1989, you didn't have any other biologists from here with you?

DAVID KLEIN: Just me.

KAREN BREWSTER: Oh.

DAVID KLEIN: And then it was the exchange was essentially between me and this Yakutskian who was -- he was a senior guy. He was in his 60's who had been the key

player working with the muskoxen, spent a lot of time throughout the whole winter up there with the muskoxen. They first fenced them in with big fencing, and then turned them loose afterwards. They became familiar with the whole area and were doing fine. Whereas the mistake made here, which they already knew and we knew, when muskoxen were transplanted from Nunivak Island to the North Slope to re-establish in the Arctic Refuge and also over near Point Hope and then on the Seward Peninsula. We made the mistake of capturing yearlings, which were the biggest you could handle, and had to be flown in aircraft and they had to be in crates and then flown, and you had to do this quickly so the animals would survive short time in captivity and wouldn't suffer malnutrition or anything. And then you just turned these suckers loose. And they were all juveniles and they didn't have any history of how to defend themselves from wolves or familiarity with the terrain. So the Soviets were trying to do it right. And in a sense they did, but building a fence there was just super costly because everything had to be helicoptered in and these big helicopters. And they frequently were using old mining rods that were solid enough, but then they had to get them into the tundra. So I don't know how they did that. In some cases, they would've braced it. Well, they first wanted to keep the Canadian muskoxen separate from the Americans, but they broke down the fence. But that was just a fence between the two and wasn't strong enough. And eventually they turned them all loose because maintaining the fence was too difficult, and also there wasn't enough forage to keep them in there for a long period.

KAREN BREWSTER: So when they turned them loose did the population succeed?

DAVID KLEIN: No, they stayed in the area mostly. They broke up into groups and then some of them gradually moved around the peninsula and they increased and they re-established themselves fairly successfully with minimum mortality. Whereas on the ones we did on the North Slope, I mean over 50%, like it was closer to 60 to 70% of them died. Some of them went out onto the sea ice and didn't know where land was. It's hard to see it that time of year, in late winter. And others disappeared. And they thought for a while that they'd all died, and they found a few of them in the Sadlerochit and one or two other places where a small number of them had persisted. It could have been as few as two but it was probably three maybe, and I forget how many they released but it was like 40 for so. So it was not well done, but it was a guess at how to do it. They wanted healthy animals, but it takes more than that. They have to know the terrain and where to go, where to find the forage, etc., etc. They were released, they didn't have any clue. The ones that went inland, found the places, windblown ridges where there's some food and then gradually -- they made it through the rest of the winter, then they could move around. But then the big problem up there was that they -- especially the Sadlerochit population, just kept one big group. It get bigger and get bigger and it was defending itself well from wolves and even bears. And bears weren't killing any. But they were starting to hammer a lot of the willows in the river, which already had some one or two moose feeding on those willows. And the moose could get by when the snow got deeper in the river valleys because it would blow into those places, but the muskoxen could only feed on them in the early winter, and then they had to feed on windblown ridges, tussock, and was prostrate willow, slopes. And so --



KAREN BREWSTER: So there just wasn't enough forage to sustain their large group?

DAVID KLEIN: Well, we assume that, but the big thing is, why didn't they --there was lots of good habitat some distance away, but there where were no big -- in other situations where muskoxen have occurred for a time, and in Greenland is like this, that there's some -- there's one or two bulls per group, and in a big group like that that there was probably more than one or two. But frequently when there's a lot of groups that only have one herd bull, but there's satellite bulls, bulls that sometimes they'll get together and be two or three, sometimes they're single bulls. They're more vulnerable to predation by wolves and subsequently by bears we learned. But there was no tradition of bears killing wolves, or muskoxen, in those early days. And there were very few wolves up there to begin with, but they are there, especially in the summer. And so at any rate -- but the assumption is that these muskoxen are wide-ranging, the males, because they're looking for other muskoxen where there may be no bulls, other females and young, or where there's a bull that they can be more powerful and kick it out and challenge it. So when they're doing that they're in other areas where they winter-over well, and they're learning about the environment and it's possible then that they can break away with a group of cows from a big group like that and take them over to this new area because they know where to go. And the females might go with them in that situation.

KAREN BREWSTER: But that didn't happen with the Sadlerochit group?

DAVID KLEIN: It didn't happen at first. Well, the ones that did happen, the reverse -- they started appearing in large numbers in Canada and outside of the Arctic Refuge. And the population was up to about 400, I think, in the Refuge, I'm guessing. And then it went down to like a handful of animals, but there were obviously animals just across in Canada that had come from there and had moved. So we don't know what the long-term situation was in the past when muskoxen were there, but they did go extinct there before they did up around Wales and Point Hope on that side of the Arctic.

KAREN BREWSTER: So anyway, back to the exchange in 1989. So you were working with this Yakutskian biologist and looking at his work with muskox in the Yakutsk area?

DAVID KLEIN: Yakutskian, no, that was on the Taymyr.

KAREN BREWSTER: Oh it was on the Taymyr, that's right, okay.

DAVID KLEIN: Then he came over, along with this young grad student who was a lichen specialist, had become a lichen specialist, and now she was working for the Institute as a biologist. But she was familiar with virtually all that stuff. She's also now fluent in English. So after these years, since I've seen her before. And it's probably just as well she didn't speak English then. But so, she was the one that met me in Moscow and accompanied me to the base camp where Yakutskian was already there. And did we have an interpreter then?

KAREN BREWSTER: Or was she the interpreter?

DAVID KLEIN: We had the same woman that had been interpreter who had -- she had also been studying biology and was now employed as a biologist there, yeah. So she was as an interpreter but this, Tatiana Leskova [sp?] is her name. Tatiana was pretty good with English, maybe not quite as good as the other one. But she -- it was her job to get me through Moscow and out there, which she did fine. And she knew the system. And had done this kind of thing.

KAREN BREWSTER: And so when they came here, what did you do with them?

DAVID KLEIN: We took them up to the Arctic Refuge, but I took -- It was just the two of them, but there's a guy Dave Swanson who is a -- he works for the Park Service now. At that time, he worked for the Soil Conservation Service. He is fluent in Russian and I knew him. So I was able to get him involved as another Russian speaker from here. And he's done a lot of -- he's a plant ecologist and done a lot of work, especially with wetlands. And so he went with us up to the North Slope, and then we went down to Cantwell. We did a national park -- Denali Park tour, but we went down to Cantwell and stayed in that university cabin they had there. And we went out into the field where Fish and Game had set up some exclosures on the caribou range there on the Denali Highway out of Cantwell about fifteen or twenty miles. We relocated those. And they had done a reasonable job of maintaining those, so that it was pretty impressive to see the improved lichen growth inside the enclosure versus a little too heavy grazing of lichens outside. And then up on the North Slope -- Oh, and then Dave Swanson's wife, they didn't have any kids yet, so she came along with us and I think she's been trained as a biologist. A very nice person and the kind of woman that interacted well with this Tatiana Leskova[sp?]. And then I think we did a -- was able to set up -- make a lichen workshop down at the hills around Cantwell. And brought some of my students along like the one that's quoted in here, Maria Berger, and was good with lichens. And then we invited other people. The other Dave Swanson who was also with the Soil Conservation Service had a lot of experience with the reindeer range in northwestern Alaska. And we had students and a lichen ecologist. We invited a lichen ecologist who had been here as a student, who lived in Anchorage. And we got her to come up. She was really good.

KAREN BREWSTER: So what was it that the Soviet scientists were interested in learning when they came here to Alaska?

DAVID KLEIN: Well, it was like -- it was strictly the individuals involved and their interests. They were allowed, as scientists, to get on with it. So Tatiana Leskova [sp?], I worked with her both while she was here and over there and we joint authored a couple of papers. One paper I was the lead author, another one she was lead author, and then she went on to -- We made connections between her and the Environmental Protection Agency about air pollution effects. And so she was an expert coming from Norilsk with air pollution in the Arctic and we hadn't had much of that. Although, we were starting to get oil field development and some pollution, but fortunately our pollution plume went out to sea primarily. But at any rate, so we got her in touch with Park Service and the Environmental Protection Agency. And so they were -- I took her down to where I had a

student working on the southern Alaska Peninsula caribou herd. Took her down there with Roger Ruess, a plant ecologist from here and we were going to visit with my grad student who was out there studying biology. He was out in the field and we were unable to get out to him because we had to go out on a small plane on floats and it was tricky because the refuge biologist with the plane was right there but the weather kept us out. So we spent most of our time staying there at the refuge headquarters, which was good because got to talk with people there a lot. And we got out in the field there and she was able to see this country that had been overgrazed by -- the lichens had been overgrazed by the reindeer. But it was a different situation where the winters were milder and shorter so that they don't need as many lichens and they're doing it -- and then they can move long distances to get away from -- and that's when suddenly they disappear and go over to the next island, the first island, Unimak Island and where there's no -- there're frequently very few caribou until some move in. And then after a number of years, they increase and then maybe wolves come across because it's a narrow, fairly shallow passage between the end of the Alaska Peninsula and the first island. So that was a good experience. So she was getting a lot of experience in the diversity where things were. And then the Park Service was keenly interested in places like Denali and coal-fired power plants. And then the Environmental Protection Agency, they invited her to go to their lab, the west coast lab in Oregon, where they do these analyses of effects of air pollution on vegetation including lichens, and stayed there. So they couldn't do that early on this exchange, but they started the process of this. Plus she was eager to get more training in the chemical processes of what's going on in the lab and how do you do all this stuff. She had some experience and some training, but that wasn't her primary focus initially. She was working mainly with just heavy metals and just there right around the metallurgical plant in Norilsk. So she had some field experience, it was just very relevant. So she came back. Oh, and then it turns out that there was a conference on campus and we had -- that she could be at, and it focused on pollution and plants, I think. And she was able to participate in that. And I think one of her papers was what she made a presentation on there. And she was able to tie in with a specific scientist from the Environmental Protection Agency based out of this Oregon location.

KAREN BREWSTER: And what about like the muskox biologist, what was he particularly interested in learning?

DAVID KLEIN: Well, he was more interested in the kind of habitat the muskoxen were in there. And recognizing that they were reintroduced there in the Sadlerochit area so that's where we went primarily, but then we flew over some of the North Slope a little bit. But the muskoxen hadn't, at that time, hadn't spread out so much. So then he and I published a paper on comparative forage consumption by muskoxen in the Taymyr and here, in the Sadlerochit I think it was. So we published that paper as a joint deal. But the case of Tatiana Leskova [sp?], then what happened is that she went back and then had to talk with authorities and what. They worked out a deal where -- this was, I don't know whether this was still the Soviet Union or whether it was Russia, but it was almost Russia at this time, anyway, when they came over. And so then they worked out a deal where the Environmental Protection Agency would be able to take their special plane, a couple engine plane, for monitoring pollutants in the air. And fly to Norilsk. And with her

involved, they would do transects, fly transects and monitor the air from this big Norilsk plant. Now this -- you know, they used to be afraid we were spies about this, but now they've changed. Yeah, this was after the dissolution of the Soviet Union because then the Norilsk plant hired her, 'cause she was going to lose her job anyway because they cut off funding for that whole institute, or most of it. So she went to work for the metallurgical plant. And so she was their expert on trying to learn about pollution, and how to minimize and what plants and stuff are affected. And so they pulled off this -- I thought, boy, this is almost impossible to take an American plane over there and it's very super developed and designed and use it to help them monitor this pollution. But not just monitor it, but lay out the groundwork for how you would monitor it in the future. So this was great. And she was almost in the position where -- I think she was invited to -- they could maybe give her a position if she wanted to come and become a U.S. citizen. She didn't want to leave for several reasons. She loved that area and her mother was ill. Her father had died in the Gulag and her mother was ill, and in '89, I think she was still alive. But she had been married and couldn't have kids, they thought. The medical doctors thought it was because of living in that pollution plume. Other young women had been in the same boat. And so her husband divorced her, I think, because she couldn't have kids. And so then, when she was over here, I got to know her. I felt pretty close to her, and she told me the institute director, this guy that -- he was a good scientist and a good guy in the long run once the dissolution of the Soviet Union. hat he had proposed to her. But he was going to be moving out to the Far East and heading up a scientific academy that dealt with animal diseases and stuff in, I think, where would he be. I think it might have been Irkutsk, yeah, Irkutsk, that's down near, the big city near the big sea. What's that, the deepest --

KAREN BREWSTER: I don't know the geography very well.

DAVID KLEIN: This is deepest freshwater lake in the world. And at any rate it's near Bratsk, I guess where they have a --

KAREN BREWSTER: The institute that you keep referring to, what was the full name of that again? Do you remember?

DAVID KLEIN: Institute of Far Northern Agricultural Research, I think that's how it's translated.

KAREN BREWSTER: And that was in Norilsk?

DAVID KLEIN: Yeah.

KAREN BREWSTER: Okay. And that was sort of your sponsoring institute that you worked with on all three exchanges?

DAVID KLEIN: Yeah, except that Tatiana was involved -- and there was a little bit of competition between her and Yakutskian when I went to the Taymyr. She had a lot of political power by this time because she was working for the industry, and whereas the

institute doesn't have much political power. It lost it. But the exchange -- she said that after I had gotten there in the Taymyr that she could arrange, through radio contact and what, for me to do another trip. Cut the trip short there on the Taymyr and do another trip to look more at the pollution deal, and she said she could arrange all that. And Yakutskian, I don't know whether she had discussed this with Yakutskian, but Yakutskian was suspect of her doing that, trying to pull me away from there, because they felt I was a good contact for both of them. But I -- she tried for a couple days after we got there, and there were other women who were more allied toward her as women than they were toward Yakutskian. Yakutskian, everybody liked him, he was a nice guy, but he wasn't a big pusher and he wasn't a politician at all. And so there was a camp down river, we're on the outlet of this big lake, down river about thirty-five, forty miles that was run by the scientific camp, botanically orientated. It was run by the University of Moscow Botanical Department on very short funding. And the senior -- a woman professor there, really nice woman. She was one of the best Arctic plant ecologists at that time. This was past the era of Andreev, the guy -- the professor, the lichen specialist that we went in --

KAREN BREWSTER: Yeah, his house, his dacha, yeah.

DAVID KLEIN: ...in '76, or, yeah '76. And so he had passed away, I think. So at any rate, she had a bunch of grad students there and they would come up to the -- they had a small boat with an outboard, and they'd come up river once a month to use the banya, the bath house, which was a sauna and close to the river. But it was a big dressing room and they'd heat water and they could wash clothes and wash themselves, the students and her. And when they came there was a big celebration and they would put on a big meal, and so that was nice while I was there. And so that was good, but I was -- Yakutskian, you know, he's a nice guy but he's like me and you go on an exchange and you can't instantaneously know how you're going -- what you're going to get out of this and how you're going to share it with a person. So he was -- thought that I could just jump in there and say, "Well, this is how it differs from where I is, and this is the specifics and etc., etc."

Because I didn't have enough information and I didn't see the muskoxen that much. Sometimes you could get within range of seeing them, sometimes they were not in the area at all. And the weather, sometimes it would be spreading snowflakes, and plus we had another direction, too. There was -- the biologist for the wild caribou was a relatively young, eager guy who was operating on a different budget. And he was -- because it was the largest herd in Eurasia, and by this time it was up around 350 or 400 thousand and it was being harvested commercially, etc., etc. And he wanted to make contacts with people in Alaska about how do you count these suckers, and radio collaring and all this stuff that Fish and Game could be a good contact with. And so he thought, you know, he wanted to get me involved as much as possible. And he did a little bit. He said he was going to come up with one of these AN-2's, which is a double-wing, single-engine aircraft. A huge single-engine aircraft that just very -- about the smallest thing they have, but it's slow flying and can land on shorter strips and very reliable. And so he flew up and landed on the -- when the river went down enough, he could land on the cobbly beach on the opposite side of the station to pick me up to go do a flight for several hours on

counting the caribou and seeing what kinds of habitats they're in. Oh man, that was fabulous. These AN-2's are slow flying, and you can fly pretty low and you can haul about 15 or 20 people.

KAREN BREWSTER: Oh.

DAVID KLEIN: Yeah. But it's really crude because these aluminum benches on the passenger side. And then are the pilot and the co-pilot, and there's no place for a navigator or something, but they had a navigator because they were up there. So the navigator had to get a board, like out of a table or something that he could sit there right behind the pilot and co-pilot with the maps and stuff. And then in the back, here were these seats and no cushions. Usually, one or two little removable cushions like these on there for all these rows. So you're sitting there facing the center of the plane. So it's not the best for looking out the windows, and the window's not necessarily clean anyway. So, I said, "Yeah, I'd go -- could go." And then he said, "Well, we'll rig you up a seat here by the window by the door, and we'll just take the window out." It was a little one, about this big, so he could unscrew it and take the window out so it was just open. And I thought, "Wow, this was great." But there was no place to sit there. You couldn't sit on the floor, it was too low. So he found an orange crate back there that was at the base camp and he brought that back across the river and they put a cushion on top of that and I sat on this orange crate. Nobody wore any seatbelts. In fact, some of them stood up like in a bus and held on. There was a handrail like in a bus. When we took off and landed. I mean, it was just amazing. Though I didn't wear a seatbelt either. But it was terrific because I could just -- They didn't have a glass between the camera, and beautiful pictures of calving ground and it was just really unique. And there was a bunch in [padded ground? @2:27:45], group of muskoxen that had strayed from this -- come from that original introduction. They moved about 60 miles from the other place. And it was just fabulous to do this.

KAREN BREWSTER: Do you remember the name of the Yakutskian biologist?

DAVID KLEIN: The what biologist?

KAREN BREWSTER: The biologist, the Yakutskian, the muskoxen biologist. Do you remember his name?

DAVID KLEIN: I think it's Gregory but I've got it in a --

KAREN BREWSTER: It'd be nice to know so we can give his full name.

DAVID KLEIN: Yeah, I think it's Gregory, but I can check on that. I've got the papers that we published, jointly published.

KAREN BREWSTER: So did you ever go with Tatiana on those air pollution trips or you just stayed in the Taymyr?

DAVID KLEIN: No, I didn't want to get too involved in air pollution. I wanted to get as well informed as I could on these other things. But that was important and I felt good about getting her involved over here.

KAREN BREWSTER: Yeah, now the first trip there were three of you, and the second and third trip it was just you, why did that change? How come you went by yourself the other two times?

DAVID KLEIN: Other people -- the novelty maybe worn off by other people and they didn't have objectives for going again? Frankly, after you're there for, especially three weeks or a month, you're ready to come home. And one of the things you do is, in your own mind -- For me, I'd worked a lot in Scandinavia and I'd keep asking these questions: "Well, is it worth getting involved in these kinds of things versus the kind of exchanges we worked out in Scandinavia without having to go through all this confusion and paperwork and State Department and stuff?" And the people in Scandinavia, you can learn so much yourself because they're up on the literature, etc., etc., etc. But they're working independently from you and so -- and, of course, those exchanges brought students exchanges, and so yeah. And so it was a balanced exchange. And I know that some of the Scandinavians who went to Russia came back and some of them had this question: "Is it worth it? Is it worth it?" And what you mean by worth. Is to me, I thought it was desirable. It was good for the well-being of science and I felt it was worthwhile to better understand people in other countries and the sciences and the same was true when I went to South Africa, which I didn't agree with the government at the time. But I felt I didn't have to agree with the government to exchange, have an exchange in science, in fact it was -- I believed strongly that the Brezhnev -- Nixon/Brezhnev Accord was good for both countries and good for the world because it lowered tensions between these two countries. So some of this was in my mind and is always part of my thinking, when I'm thinking about international work and same in Portugal. I learned so much about how people approached problems, environmental problems, and they're different in these different areas. And sometimes you think well, it's because their -- the environment is different, it's the different weather and different plant communities, but it's much more complex than that. It's culture relationship to the land and how you use it and what are your priorities, and as well as how it fits in with other activities that are conflicting. Like one of the issues in the Taymyr was, when I first went there in the first exchange, in the institute the attitude was -- the Soviet Communist attitude is human domination of the environment. And in Norilsk, no it was in Yakutsk, an important monument there is this big pedestal and what's on it? A dump truck. And that's because establishing a winter road and bringing trucks into Yakutsk was so important economically. And what's important economically relates to everything else, including the university there in Yakutia. And how can you run an university if you don't have some support for food stuffs and other things that are coming in, if you want students to come there from other parts say of Russia. And so we deal with problems differently, like here how does the present governor or the future governor affect science and education, science education. To me, that's some of my motivations for getting a little bit involved in politics. But basically, it's a value of science. And I thought Parnell had some attributes that were good at the beginning of this, shortly, I think, after he was elected.

KAREN BREWSTER: He was better than Palin.

DAVID KLEIN: And he made this statement that we've got to get more science education into the schools. But then he just recently gave money back to the oil industry and we have to lay off school teachers who are needed to teach science in the schools, and stop these programs that are designed to educate the teachers to be good science educators.

KAREN BREWSTER: So I just want to sum up about these exchanges. You kind of answered it about were they worthwhile. But I was going to ask from both sides, what the Soviet scientists may have felt and how you felt, were they successful or were productive? You used the word worthwhile, but --

DAVID KLEIN: Well, yeah, and as far as I'm concerned, yeah, because Tatiana represented interests of the Russian government finally, but it was the Soviet first. She said there was a problem and believed that they should be doing more about it and then it looked like there was more chance of her playing a role in that after the dissolution of the Soviet Union. And I felt so good about her. The connections I could help her with with the Environmental Protection Agency. And that seemed like this is ideal because I can't do much for her there. But I can make this connection, help to make the connection. And did that and fostered it.

KAREN BREWSTER: And the other Soviet scientists that you worked with --

DAVID KLEIN: Gregory?

KAREN BREWSTER: Yeah, and then even the first year, did they express satisfaction or -- ?

DAVID KLEIN: Well, we didn't know then because we didn't get to interview those people really. But they all did, and this guy Mukacheve [sp?] indirectly I have had -- he felt toward me like I felt toward him, high respect. He published, in Russian -- after he was retired, he published a lot of papers on the indigenous people and reindeer herding. And I have one book, I don't think I have a copy here, but it's in Russian. And then we had this Russian woman here that -- she was sort of like an anomaly, she came out of nowhere and left again. But she was here for a couple of years and she was -- she must have been 70 years old but she acted like 60 and she was kind of a dumpy Russian woman but she was an artist and had an amazing story about her life. That's a long one, but it was partly written up before she left the Soviet Union after her husband was apparently killed. He was a dissident and an artist and apparently killed by the Russian, Soviet government. And they apparently used a needle or something and poisoned him and his woman he was living with in his apartment at the time, and then these guys left and set the place on fire and so it all burned up. And there was an investigation and, of course, nobody wanted to find out, the government didn't want to find out. So then she had two kids, I think, and she was finally able to get out and it was 'cause she felt the



Russians, the Soviets wanted -- she knew too much, knew that they had deliberately killed this dissident husband. But he was working -- she knew he was a philanderer and they were living separately, but she was supporting him because she was doing good work for the -- artwork in ceramics, stained glass, and what. And she had a cover for herself, but she finally was able to get to, I think, Czechoslovakia first with her kids. She didn't have much money and she was not very religious but she said the Catholic Church came through and provided some support until they finally ended up first in New York, and she got a job in art making jewelry, I think. And then she made artificial teeth. That's how she got here, she took a -- I'll keep this short because it's very complex. She went to Texas with her daughter and the son was sort of like a womanizer and he was older and terrific, artistic capabilities. He was living in California, I think. There may have been a third child, maybe another daughter, I don't know. But they bought a place in -- she made good money in New York City apparently, but they wanted to live out in nice country, they didn't like living in the city. So they bought a place in Texas in a small, little area, a farm type deal, and the community loved them. Here are these Russian immigrants and really good artists. They had a couple of dogs and they got along well with neighbors and what. And they didn't go to church but the daughter was such -- had become an excellent artist and she was in high school, I think, and they were building an addition on the school and she volunteered to do all this stained glass work that was mega bucks, but she volunteered and her mom helped. And so they were really popular and then, just for curiosity, went to one of these black churches in the area. And they were building a new church and they wanted to put a bunch of stained glass in and they couldn't afford it, and so they did it for this church. When that happened, the white community in Texas just turned totally against them.

KAREN BREWSTER: So they came to Fairbanks?

DAVID KLEIN: So then, I think the daughter went to college and the son was getting by well, too well, in California. She came up here because she applied for a job. She was fascinated about Alaska, idea of coming to Alaska, and she got a job in North Pole with a dentist and doing this kind of stuff. She was still doing, through Internet, some artwork for ceramic, for jewelry. I saw some of her stuff, I mean just really -- She was talented, knew the technology and everything. So she would take the bus. She was working part-time for that.

She'd take the bus from where she lived in North Pole, didn't have a car. I don't think she knew how to drive, but she'd take the bus to town and then have to wait for a connection and sometimes she'd have to walk long distances. She didn't mind walking. And she ended up here on West Ridge, and she volunteered to do things. She asked if she could take a course that had to do with -- that I was teaching after I retired, where we only met once a week or something. It had to do about subsistence cultures and stuff, and wildlife management. She was -- I thought, oh, this is a strange woman. She called me up and had a very strong Russian accent. And then she volunteered to pick through vegetation that Skip Walker had from his field work, and she loved doing this kind of work. And it was like she loved the people. And when she'd stop by my office, she was considerate of your time, but man you get talking and it'd go on and on. And I always enjoyed it. And then frequently she'd come -- here she'd come all the way from the North Pole and she'd be

carrying a basket or something and there was these fresh Russian biscuits or deals. She would, "Oh, have some of these." And she had for, not just me, for other people. She was just a wonderful, kind person.

KAREN BREWSTER: Well, it sounds like your experience in Russia with the scientific exchanges helped you have an affinity and understand and be interested.

DAVID KLEIN: Well, I feel I'm pretty worldly because I understand and appreciate other cultures. And I always see other cultures and I try to see why they're different. And I have a better understanding because of their relationship to the environment, which they live in because I'm trained that way and that's where my curiosity is. I mean, I love to travel and I love to visit new places, but I have to limit.

KAREN BREWSTER: Well, the fact that you've been to these places and done scientific work and worked with local scientists, you haven't just been a tourist, you've really gotten to know places and people. You're fortunate that way.

DAVID KLEIN: Right. I can't remember her name, but she's really --it'll come back to me. I'm really glad I got to know her. But at any rate, she had to read this book that Mukacheve [sp?] wrote about these -- it was stories. She said, "This is some of the best Russian literature I've ever seen." I said, "Well, you could help if we -- help to see if we could get it translated." And I tried to make contacts with her -- with people who, like the guy that works with the reindeer on the Seward Peninsula. I don't remember his name right now. And others with the RAP [?] program. And they all initially were interested, but they're so tied to contracts to cover anything, and they just didn't have time to write a proposal and that's what it takes. And probably the best place, and I probably suggested that, was to go down to the literature and journalism area and talk with people. But I couldn't do it. She's the person that should have done that, but she was doing so many other things and didn't have time to do it.

KAREN BREWSTER: Well, what do you say we call it --

DAVID KLEIN: Sounds good.

KAREN BREWSTER: For tonight. Okay.