ORAL HISTORY

Of

Bruce Conant & Jim King

Waterfowl Aerial Survey Biologists (Retired)

Interviewed by
John Cornely
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JC: This is John Cornely in Anchorage on April 27, 2006. We are now going to visit with Bruce Conant and Jim King. Bruce is going to tell us a little bit about his career. Jim King's career is well documented elsewhere and in his book, *Attending Alaska's Birds*.

BC: I guess first, before I forget it, a little bit about Clarence Rhode, which was on my mind, and Malcolm Greany, who Jim just referred to, who was the photographer for the Alaska Regional Office of the US Fish and Wildlife Service (FWS). Malcolm came to Juneau, oh, it must have been in the middle 1980's and stopped by our office. Jack Hodges and I took him out to lunch. He told us a story about what kind of a person Clarence Rhode (FWS-Alaska Regional Director and Executive Officer of the Alaska Game Commission, 1948-1958) was and how he (Malcolm) got a job with FWS. Malcolm had arrived in Juneau and went for a walk out Basin road, which is up behind Juneau. Clarence Rhode was walking along the road there, I guess he was getting his exercise or something, so he happened to see Malcolm and they got to chatting and he asked him what he was doing in Juneau. Malcolm explained that he was just there looking around for a job. Clarence asked him what kind of work he could do and he said, well, I'm a bit of a photographer. Malcolm's story is that by the time they got back to town, Clarence had offered him a job as a photographer for the Service.

JK: Clarence didn't have authorization to hire a photographer so he hired Greany as a game agent. (Laughter) At that time FWS in Alaska did not hire from a Civil Service roster, as was used elsewhere, and which required applicants to take an exam. So, all Malcolm had to do was fill out a form and go to work.

BC: That is an example of how much simpler it was in those days. Also, Malcolm told us this story, which sort of tells a bit about what kind of guy Clarence Rhode must have been (Jim explained how well known Clarence Rhode, as Alaska Regional Director, was and how he was a super busy guy). Malcolm said that he once came into Rhode's office and Clarence pushed his work away (whatever he was working on) and he turned his chair like this (towards Malcolm), as if he was the most important person in the world to talk to and that made a big impression on Malcolm. I think that shows a whole lot about just what kind of a guy Clarence must have been. Well anyhow, I guess I'll tell a little bit about my history. I was born on a small dairy farm in southeastern Michigan. Well, I wasn't born on it, but I was raised on it, and grew up in a house that my great-great-grandfather built back in the 1830's, when Michigan was the northwest frontier. My mom, who just turned 93, still lives in the house on the farm, although suburbia is encroaching on it. So, I grew up there with an interest in the outdoors and wildlife. My dad was an amateur botanist and he was a member of the Southeast Michigan Botanical Club, so we did a lot of outdoor things (field trips, campouts, etc.) Then I went to school at Michigan State University in East Lansing, Michigan where I received a BS degree in Fisheries and Wildlife in 1967. I had a

number of summer jobs, but the one in my last year in school was doing fisheries work out on the Alaska Peninsula as a what I guess was called a Stream Guard at that time, counting salmon from a salmon tower. We didn't do actual enforcement, but rather gathered biological information. The way we got our mail, about every 2 or 3 weeks, was via a super cub aircraft that was flown over from Sand Point on the other side of the peninsula. That showed me the value of aviation in Alaska. I had a bit of an inkling of that before, because I remember we had a wildlife club there at school (MSU) and I was a member. John Hakala, who was a National Wildlife Refuge Manager in Alaska on the Kenai before, but was at that time down on the Seney National Wildlife Refuge in Michigan's upper peninsula, gave a little talk one night at our meeting. He talked about Alaska and explained how important getting around Alaska was with an airplane. So, that perked my interest in Alaska and aviation. I joined the school flying club at Michigan State University and got my private pilot license in 1967. That would have been the spring before I came up to Alaska on that summer job. So, I put those two ideas together (wildlife and aviation) and decided that what I wanted to do was come back to Alaska and I wanted to pursue the aviation angle. Well, about then, the Vietnam War was going "hot and heavy". After graduation from MSU, I had a permanent job lined up to come back to work for the State of Alaska as a Fishery Biologist at Kodiak. I thought long and hard about that offer, because it was a real chance to get back to Alaska. However, I was concerned that I was going to get drafted into the military. So, I decided I would try to get something positive out of the whole military experience. I tried to get in with the aviation program with the Coast Guard. They only had a small program, a person could only get in every 6 months. So, again, I was afraid that I was going to get drafted in the mean time. I ended up joining the US Navy in 1968, went through their aviation training program and received my Naval Aviator wings in 1969. I got out of the Navy in 1971, because the Vietnam war was starting to "wind down". In military aviation they have these waves of personnel things that go through, where they don't have enough pilots. Then they train up a whole bunch of pilots, which takes awhile, and then they have too many pilots. So, I got one of the early outs as they were called then. I got out in the spring of 1971, drove up to Alaska and wandered around the state looking for work. I also was just sort of checking out the parts of Alaska from the road system that I hadn't seen before, places like Denali Park, Fairbanks and so on. That fall I went into the FWS Regional Office in Anchorage looking for a job and had an interview with Dave Spencer and Mel Monson. There weren't any jobs available though. I did pick up my aircraft float rating out at Lake Hood that fall under the GI Bill and then decided to head south for the winter. I went to San Francisco for awhile and then wandered back to Michigan. By spring, it didn't look like anything was going to happen with jobs in Alaska. It was a difficult time to find jobs, in the early 1970's, especially for a Wildlife Biologist. I finally lined up a job driving a dump truck with the local County Road Commission, because I had worked for them for 3 summers in high school and early college. Then I got this call from Mel Monson (FWS in Anchorage) who said that they had a temporary Fisheries

Biologist job available in Fairbanks and would I be interested in it. I thought about that for a little bit, because that was a temporary job and I had a permanent job lined up, but I finally decided I'd go back to Alaska and try that. So, I did and I received some unofficial, on the job evaluation. I must have passed because they offered me a permanent Fisheries Biologist/Pilot job in Juneau. So, I went down to Anchorage and got checked out in a standard piston deHavilland Beaver on amphibious floats. What they really needed was a biologist/pilot to fly a Beaver down in southeast Alaska. This was part of Mel Monson's plan to build up the southeast Alaska FWS operation. I remember that fall (1972), in early October, I took the project assigned airplane (standard Beaver, N728, on amphibious floats) down to Juneau after my training and check out. The disappearance of the airplane with Begich and Boggs, that was making a trip from Anchorage to Juneau, had just occurred. So, they told me on the way down, why don't you try and look for any evidence of that airplane along the way (it never was found). Jim was talking about the old FWS Alaska Aircraft Division. I got in on just the "tail end" of that operation and got to see a little bit of it, got a little taste of it, before the combined Department of the Interior, Office of Aircraft Services (OAS) came along. I remember going into Theron Smith's (the Aircraft Supervisor for FWS Alaska) office just before I left with the Beaver. We sat there and talked about things for a couple of hours. He explained how 'southeast Alaska could be like flying in a "mill pond" some days, but on other days you'd better be "on your toes". Talk to everybody you can about flying down there, the local people and the local pilots, about how it is to fly down there'. Also, Al Kropf (sp?), who had flown a FWS Grumman Goose down in southeast Alaska for many years, was in the Anchorage hangar at the time I was checking out in the Beaver. He had just retired from Fish and Wildlife and he was actually building a small airplane in the hangar there that he was going to take down to Oregon in retirement. So, I chatted with him a bit about flying in southeast Alaska. I remember a story about him. I had just come back from flying one day, when I was checking out in the Beaver. The fueling pump was outside the old hangar (the hangar is still there, but the parking area is all paved now). We used to taxi directly out to the International Airport from there, down a small road in those days. I pulled up to the pump there, fueled it up and went inside to do something. I just left the flight controls loose. It was a calm day and I don't know for sure, but I am pretty sure that Al Kropf was watching me and he saw that I didn't hook up the flight controls, because when I got back to the airplane here was the lap belt over the control yolk so it couldn't flop around in the wind, which wasn't blowing. From the stories I had heard about Al, that's the kind of guy he was, he was very precise and particular about those kinds of things That is one thing I've always remembered in my whole career with FWS flying. Don't ever walk away from the airplane without locking up the flight controls, because you don't know if some big ol' aircraft is going to pull up right in front of you and blast you with air or whatever. Well, anyway, on the way south with the Beaver, along the coast, Chuck Evans was flying a FWS Goose, actually doing a search for the missing airplane. I remember I got a late start out of Anchorage, so I stopped at Cordova.

Chuck was there with the Goose and we had supper together and talked about flying and things. Then I continued on down to southeast with the standard Beaver. I learned a lot from talking with people, but a lot on my own flying around southeast with a standard Beaver on amphibious floats, operating on/off salt water. There are a lot of things to learn about operating an airplane on salt water. One is how corrosive saltwater is to everything, especially airplanes. You learn to take a can of oil with you when you walk around the airplane, doing your preflight inspection, spraying things down with oil. Also, I tried to always land in a freshwater lake and cycle the landing gear down and blast fresh water on the tail to try to keep the salt water corrosion thing under control. Jim was there in the Juneau office. We had a small office, less than half a dozen people I guess, so I started to notice what he was doing in the Service and we talked about aerial bird surveys. Because Mel wanted us to start doing things in southeast Alaska, I started trying to fly some waterfowl surveys down there. I remember Dan Timm, a State of Alaska waterfowl biologist, went with me in the standard Beaver a few times. He had gone with Jim on the annual Alaska-Yukon breeding pair survey. One spring, I was up in Fairbanks for some reason when Jim and Dan were doing the annual spring breeding pair survey. I went along in the backseat, for a day, when he and Dan were doing the survey on the Yukon Flats. So, I got a little taste of that survey operation. In 1975, I got the opportunity to apply for a job with the Flyway Biologist program down south (now in Region 9), the group in FWS who do most of the continental waterfowl surveys. I was selected for a Trainee position there. My wife and I moved to Maryland, that would have been in late 1975, and spent 6 months stationed there. I was assigned to fly in northern Saskatchewan and northern Manitoba on the continental breeding pair survey with Art Brazda. I only spent 6 months in Maryland, but I was gone most of the time, as my wife reminds me. In the fall, we moved down to Lafayette, LA to work directly with Art in the program there. I worked with Art for a year and a half there continuing to do the surveys up north with him in the spring and summer and helping with the preseason waterfowl banding program up there. I made one trip down the east coast of Mexico with Art, did some survey work on my own in Texas and Louisiana with one trip over to Florida and one up to Arkansas. Then, it must have been late 1977, Jim King convinced Jim Bartonek (who was the Migratory Bird Coordinator in Alaska then) to increase the survey program up here in Alaska. There eventually were 2 jobs advertised on what was then known as the "green sheet". One was to work on bird surveys on NPRA (National Petroleum Reserve Alaska) out of Anchorage and the other was to work directly with Jim in Juneau in his program down there. I decided to apply and I remember Jim Bartonek called me up and said that I was selected and would I take the job working on the NPRA? I said that I would rather go to the position in Juneau. So, that is how I went back to Juneau, in early 1978, and started working directly with Jim. I asked about the FWS turbine Beaver (N754), because it was in the FWS Anchorage hangar, being built when I first showed up in FWS in 1972. This airplane is a one-of-a-kind, turbine powered, deHavilland Beaver, specially modified by FWS for aerial bird survey work. Jerry Lawhorn and Theron Smith,

in our Aircraft Division, had designed it and did a lot of the modification work on it there in Anchorage (based mostly on comments about the limitations of the standard Beaver for survey work from Jim King.) It was still in the hanger, not in flyable condition, but I knew that Jim had flown it some before I had left for Maryland. When I got back, the whole thing that Jim explained about getting it back in operation had happened. Jim King and Jim Bartonek flew the Alaska-Yukon breeding pair survey, in 1977, with the turbine Beaver. So, in 1978, we were going to fly the spring survey again in N754. We went to Anchorage, on Mother's Day as I recall, and Tom Belleau, with OAS, was our check pilot. Jim wanted me to get checked out in N754 so that I could do some flying with him on the survey, my first whole spring survey trip in Alaska. I still remember making that first takeoff with that airplane. Just like Jim said, the standard Beaver is a good "bush" airplane, but it isn't a great survey airplane. However this airplane (N754), you could tell right off that it was an airplane that you could fall in love with, it just makes aerial bird survey work so much easier. So, I got checked out in it. Then I made the trip with Jim and we did a little switching off on the piloting. I eased in to flying N754, more and more on my own that year. In 1979, I made a trip up north to Kaktovik in the Artic National Wildlife Refuge with Mike Jacobson, who is in our office in Juneau in the Bald Eagle project now. We did some survey work on snow goose with Mike Spindler up there. Then I flew down to the Yukon Delta, where Chris Dau was working on the Yukon Delta National Wildlife Refuge, and did some aerial survey work with him. Then I flew over to the Alaska Peninsula and did some aerial work on shorebirds with Bob Gill who was with the old FWS Research Division. All together, I was gone about a month and I learned a lot about Alaska and flying that airplane. This year, I am in the process of "handing the reins" over to another survey Pilot/Biologist, Ed Mallek in Fairbanks. So, in about two and half weeks, we are going to start out on the 50th annual Alaskan-Yukon breeding pair survey. It will be the 30th trip for this special airplane and I think that is a bit of a milestone. I don't think any other airplane has been used that many times in probably any survey, but especially the breeding pair survey that is done every year and is really the "bread and butter" of the whole aerial survey operation for evaluating the status of waterfowl in North America. The whole national program just celebrated their 50th anniversary 2 years ago. We are 2 years behind them because of how we were a little bit later in staring up here and also because we have always been under the Alaska Region instead of under the Region 9 program, headquartered in Laurel, MD. Jim can tell you a bit more about the early years, but I will say what I think I know about it. Knowing a bit about what kind of a guy Clarence Rhode must have been, I can envision how and why Clarence hired Hank Hansen, who started the official Waterfowl Survey Project in the Regional Office, which was in Juneau at that time. I would bet that Clarence got wind of what was going on down south and thought well, by God, we can do that too and he started setting up a dedicated Waterfowl Project up here. Also, prior to that, Dave Spencer came to Alaska in 1948 to work on the Kenai Refuge. He was one of the important pioneers of waterfowl air surveys on the Canadian prairies in the 1940's. He flew

a waterfowl survey up here on the Yukon Delta in 1949. He also flew some other waterfowl surveys, every year, until Hank Hansen showed up. The other part, especially back then, but to some degree still, is the perception that Alaska is "off to the side" by quite a bit. It is not in the heart of the waterfowl production area, that being the "duck factory" in the prairie pot-hole country. Hank, who was an ex-World War II pilot and was certainly qualified, came up and started out by borrowing the other Service pilots and airplanes to start the "official" Waterfowl Survey Project. Then, at some point, he decided he was going to fly the whole spring breeding pair survey himself. Jim said that people scoffed at that idea. Experienced Service pilots did not see how he was going to be able to fly around most of Alaska in a month. They thought that they would just sit back and watch this operation. Then, begrudgingly, after he had done it at least one or two years, they thought well, it's not very probable, but at just that one time of year it is possible that it could be done and so he started doing it that way. Jim was a FWS pilot, early on, who flew Hank around and also went on the surveys and he eventually worked into the Project. Hank left the Waterfowl Project in Jim's hands in 1964 and moved down to the "lower 48" in the capacity of supervising that national program. Jim could probably tell this story better than I, but I think that the first Flyway Biologist meeting that Jim showed up at, one of the first things that came up was that they were going to move Jim to Portland, OR. Hank had always felt that the Juneau Project was not quite in the mainstream here and if we moved the program down below, it would become a "full fledged" member of the whole continental program. But Jim, of course, declined that and so the waterfowl project stayed in Alaska. Then I got "mixed up" in it after having the training with the Flyway Biologist program. Mort Smith was running it down there, when I started, and he is the guy who hired me for the Trainee position in Maryland. When it became clear that I was going to come back to Alaska, Mort wanted to maintain his connection with me, I guess, and sent me down with Duane Norman on the west coast of Mexico survey. So, what was intended was to keep an Alaska connection with that mid-winter survey, beyond Alaska's connection with the annual breeding pair survey. So, we did and I have been flying the Mexico West Coast Survey every year since 1982. It is primarily a survey for black or Pacific brant. However, every 3 years (although it has varied through the years, but on a periodic interval) the survey is flown a little further south and duck (as well as some other species) numbers are estimated. We go down there mostly because of the brant, since some 70-85% of them, depending on the year, are down in Mexico in the winter and that is the place where we get the best population estimates. This is sort of a brief "snap shot" of how I kept involved with the Region 9 program over the years. The Flyway Biologists have an annual meeting that we have been trying to attend regularly since I joined the Juneau Project. Early on, when I started down below and also what Jim was doing up here, the waterfowl population data was all entered into a main frame computer back east. The process involved transcribing our voice tapes, during the survey, onto field forms in the evenings or on non flying days. Then we had to transfer that data on to another computer punch form, labeled a 3-158, which the

computer punchers used to punch data from into the main frame computer. So, Jim and I, one evening, were in a place where you "quench your thirst" out in King Salmon on the Alaska Peninsula. He and I decided that if we could shorten that process, it would be easier for the pilots and the observers to not have to transfer data. Plus we would also eliminate a step where pilots and observers, weary from flying all day, could introduce transferring errors. We came up with a plan to combine the two forms (field form and 3-158) and I still have in the files in Juneau the old bar napkin that we designed this system on.

JC : You need to get that in the archives. (Laughter) Maybe in your will, take this napkin and get it preserved.

BC: So, we showed up with the new form at one of those annual meetings down there and said, hey, we've got a new idea here. We had somebody in Juneau design some forms with a carbon copy on the back, so that it would work well. When you finished transcribing data, you'd rip off the bottom sheet, send it in and the computer puncher could punch data from it. No transferring of data from one form to another was required. Well geez, this was a major change to the "mode of operation" which "caught them off guard". Now, this is the other "side of the coin" about not being administered by Region 9, they couldn't quite direct us not to use it. They said that, as long as we got the data to them and they could enter it into the main frame, we could try it. So, we used our form. The next year they came out with a "report card" on all of the mistakes everybody had made in their survey data, not just us, but others as well. We had some mistakes/omissions in the headers (minor information like flight direction, weather, wind direction, etc., even though the bird numbers were fine) so they tried to make the case that the new form would not work. So, we made a concerted effort the next year, because otherwise they'd make a case to the Alaska Region to have us stop using our form. Then, at the next annual meeting, I think that we maybe had one or two, but hardly any mistakes. So, then they didn't say anything and we continued to use our form. Then about 5 years afterwards (Jim had retired and I had hired Jack Hodges), I showed up at the annual meeting and they had decided that they were going to adopt our format. They wanted to use the one form (instead of two) that we designed instead of having to transfer data. Well, the mini computer age was just starting and Jack, because of his background, took an interest in their potential. Before the meeting, he showed up at the office one day with his little tiny computer. They weren't much then, but they were capable (with Jack's programming) of transcribing waterfowl data directly into from the tape recorder. I had a couple of them with me in my brief case, because they were pretty easy to carry. So, at the meeting, they were just starting to talk about adopting our form when I said, well, before you go too far "down that road", maybe you would like to take a look at what these little things can do. (Laughter) A comment was made that you can't trust these guys with computers out there in the field. Finally, begrudgingly, they said 'oh we'll let you try them'. We can't stop you from using them, but we want you to print out all of the data as you go in case the computers

fail. Okay, so, that is what we did. There again, we made a concerted effort to make sure we didn't have any mistakes and we kept all of the little paper print outs of the data so that they could check them against the computer files. So, we went on that way for awhile. We got some better little computers and finally they sort of warmed up to that idea. It was about another 5 year period and I showed up again at the annual meeting. By then, Jack had come up with a program to capture every individual observation with a GPS (Global Positioning System) position because GPS had come along in the mean time. Well, that opened up some people's eyes! I remember, in some of the discussions out in the hallway, that they wanted to know more about that idea. (Laughter) Anyway, those examples show how it is important for us to stay involved with that group, but also be administered separately. We also are directly involved because we annually fly the Alaska-Yukon strata of the continental breeding pair survey (which are an increasingly important part of the overall continental waterfowl aerial survey program) and because of my involvement with the Mexico mid-winter survey. Here, in Alaska, we have had the luxury of experimenting and expanding on our survey program. It's not that the "lower 48" program wouldn't or couldn't do that, but they have been "strapped" by being short of people and they still have a problem finding consistent aerial observers. They have to keep borrowing observers from other programs and that is the way it was up here too, early on, when Jim started. But when I started working directly with Jim, we then had two people in the Waterfowl Project that could each be counted on, in successive years, and we built on that idea. Now, in the Juneau Waterfowl Survey Project, we have a four person team (or three and a half, however you look at it) with two full time pilot/biologists and also Debbie Groves as our full time wildlife biologist/observer, GIS (Geographic Information System) specialist. "Icing on the cake" is having Jim working part time in the Project as a rehired annuitant. We feel we've got (and I hear the term used up here) the organizational "model" for other waterfowl aerial survey Projects. It's a really nice size. It gives us a lot of flexibility, a lot of continuity and it's been possible because we weren't directly under the overall Region 9 program.

JC : Has there been any attempts at copying this model? Like maybe when Hank went down to the other program? To take the Alaskan aerial survey program and make it part of the Region 9 program or has that not ever really been a major issue?

BC : Well, just Hank's idea that we should be a more integral part of the Region 9 program, I guess when he moved down there. Maybe you'd like to say a little more about that Jim?

JK : Well, I can mention that they had decided that they'd move the Alaska position to Portland, OR in order to have somebody in that area. After they built the Grand Cooley dam it changed the whole hydrology of that intermountain area there and a lot of seep lakes developed. These were, I guess, on flooded farm land and there was a big build up of mallard populations. That's what they were concerned

about. They wanted somebody surveying mallards there and they thought that there weren't any ducks in Alaska in the winter so I'd be better off down there. Well, I couldn't agree that there wasn't anything to do in Alaska in the winter (Laughter), or that those mallards were more important. So, I appealed to Ray Woolford who was the Supervisor in Portland, at the time, who I answered to. Before I had bought my house in Juneau, I had thought that the Waterfowl Project ought to be in Fairbanks. So, just to make sure that something wasn't going to happen before I signed the papers for my house, I called Woolford and asked him if he thought I ought to do that? He told me, 'yeah, go ahead', there is no reason for you to think that you aren't going to stay there in Juneau. Then Hank Hansen tells me, a week or so later (I hadn't made my first house payment), that they had decided that I was going to move to Portland. But, Woolford had kind of made a commitment and he stood by me. My position was that coastal Alaska wasn't Canada, it was on the American side and there needed to be somebody looking at what could be done here. Where were the wintering birds here? So, after that, I felt that I had to show something. I said that there were things to do here and I'd better be doing them. So, it was a great stimulus for me to go down, every fall, to do brant surveys with Bob Jones at Cold Bay and to try to do some winter survey work in southeast Alaska. I couldn't do much with the ducks, but we got into bald eagle surveys in southeast Alaska, got into some sea bird surveys and did quite a lot of things just to show that there were things to do. (Laughter) Hey, one thing, it was really Dave Spencer that started the transect concept for aerial surveys in Alaska. He had been part of the crew that developed the "segmented transects" in 1946 and 47 in the prairies. Then, in 1948, he came to Alaska as a Refuge Manager. In 1949, Spencer flew the first experimental transect counts on the Yukon Delta. Part of the Yukon Delta had been a wildlife refuge going back to Teddy Roosevelt's day (1909) and had been abolished by executive order by President Harding, in 1922, for political reasons. Wildlife biologists knew that the Yukon Delta was special and absolutely were nervous about the refuges that were only established by executive order. They could go "out the window" pretty fast. That worried Spencer, who had been promoted to Refuge Supervisor. He really jumped on the Wilderness Act, thinking that Congress isn't apt to reenact legislation on all of the refuges, but they might establish Wilderness Areas on the refuges and that would be just as good. Congress creates Wilderness Areas and only Congress can abolish them. There had been some other experimental work and Hank put all of the bits and pieces together. He came up with a waterfowl breeding pair survey that he could do, each year, himself. That was a concept that I got involved in, then Bruce and it is a good concept. Essentially, we only improved on little things like the forms. (Laughter) But, essentially, we followed through with Hanson's lead. There were some other peculiar things about the Alaska survey. In the prairie areas they'd use 18 mile segments of transects because that's where the section lines are and we don't have those obvious section lines. So, Hank used 16 mile segments, because that made a rounder figure for mathematically expanding the sample and Bruce is still using 16 mile segments.

BC: Well, the sixteen mile segment gives you a nice, even four square mile sample instead of four and a half. So, that is probably why Hank decided to go that way. It is good that Jim put the part in about Dave Spencer. That was an oversight on my part, because Dave, I think you know, was a quiet, reserved person and doesn't often get a lot of credit for being in on the very beginning of all of that early survey design work, especially down south. I think he brought that thinking and background up here. He was involved in some of the early surveys that Hank put together too, to get it going, so that is important. I guess there is one other aspect to mention. I don't know, not terribly long ago, there was an effort made to split up our program up here because it had grown. We have a station in Fairbanks which Rod King headed up. Rod showed up to take the job I didn't take when I came back to Alaska. He actually took it before I took the one with Jim. It was the one working on NPRA. So, he was doing survey work up there and then he convinced folks to establish a Field Project in Fairbanks. He moved there as the first Project Leader of the Fairbanks Waterfowl Survey Project. He hired Ed Mallek, who followed him as Project Leader when Rod moved to the "lower 48" program. Now, Karen Bollinger, who started with the Juneau Project and also went south with the Flyway Biologist program, is coming up to help Ed. Then we established a Waterfowl Project here in Anchorage, mainly to work on geese on the Yukon Delta. Bill Butler, who had worked on the Yukon Delta Refuge, started that Project. Those are all "out growths" of the original program that Hank and Jim were involved in down in Juneau. I think, just a few years ago, somebody decided that we needed to realign things. The word came down that they were going to split me out and make me part of the National Region 9 program and that the rest of our program was going to stay administered in the Alaska Region. The story that I heard was that Dick Pospahala, who was here at the time and of course was involved with the National Region 9 program from a long way back, slowly convinced the folks involved in making decisions up here that it would probably not be a good idea to split us up and they eventually did drop that idea. Russ Oates could tell you way more about all of that than I can, because I know that he was directly involved. Those are the only two attempts that I know of where they really tried to blend the Alaska program directly into the National program. However, I think if you look at it closely, it has worked fairly well over the years the way it has been organized and administered. We have made some significant contributions. The Juneau Waterfowl Project's considerable contribution to help establish the new National Wildlife Refuges up here was a major one. We do stay directly involved with other FWS programs, but primarily with the Region 9 survey program.

JC : In your office in Juneau, you said that there are more people there? Are people there from other programs that you are collocated with?

BC: Yes, when I started there it was with I think then called River Basin Studies. That national program turned into Ecological Services. Also, there was a Law Enforcement Project. Fred Robards and Sid Morgan were there, originally with

Law Enforcement, but that Project evolved into the Bald Eagle Project when Jim and Fred started doing bald eagle work. That eventually evolved into a statewide Raptor Project (including bald eagles). Phil Schempf heads up that Project with Mike Jacobson, otherwise known as Jake, as the Bald Eagle Specialist. We also have about half a dozen people with the Ecological Services group and one Law Enforcement person there now. We have had a couple of FWS 65 foot vessels in Juneau for a long time. Recently they sold one of them, but we still have one there.

JC: There is a lot of talk very recently about having more offices kind of like that where you've got cross program folks. I know that we have had one in Region 6 in Bismark for many years. It has Refuges, Ecological Services, our habitat population evaluation team (which is part of Refuges) and some other folks in it. Would you comment on the concept of the co-location of folks from different programs and whether you think that is a good idea or it doesn't matter, or just your experience of having various program folks close together like that?

BC: Well I think, that from my perspective, it has been a good idea. That is how I got exposed to and interested in bird surveys with an airplane. That is one of those things that in college you don't even have a clue about, something like that even going on much less what a neat thing it is. In Juneau we have fallen down a little bit now on keeping up with each other's work, but we still get together at times. We used to have a joint coffee break every morning. We would sit down and talk with each other and just learn more about what was going on in the Service beyond our own programs. It is useful to have daily contact with other employees and learn what they are dealing with. I think that it has been a good concept. Also, I like that our office is not huge, like the Fairbanks office, where you have 3 Refuge offices collocated with a big Ecological Services program. The Law Enforcement folks and our Migratory Bird operation are actually in a separate building from the Federal Building in Fairbanks. It would be almost impossible to get to know all of the folks that are involved with all of those programs there, where as we have a size that is nice and family like, almost. Jim, do you want to add to that? You were there when I showed up, when it was even smaller.

JK: Well, I think that you covered it, but here are a few thoughts on the history of swan work in Alaska. There are a lot of published reports of Trumpeter swans in Alaska in the early times. People knew they were around in the summer and knew the difference between the Trumpeter and the Tundra swan, but up until the early 1950s, nobody separated the ranges. Nobody saw very many swans, because they're not many in Alaska in the winter and in the summertime they are out in just a big bog and most people can't get out there. The pilots knew that there were some swans around, but they didn't know much about them. Then, Mel Monson did a River Basin study on the Copper River. He found some nesting Trumpeter swans in the Copper River Canyon, at the Bremner River area, and he wrote a little paper about those (published in 1958). He measured eggs

and identified the swan call. The eggs were much larger than Tundra swan eggs and they turned out to be a little bit larger than Trumpeter swan eggs in Montana. Then Dave Spencer checked out the swans on the Kenai peninsula and Jim Branson checked some of the other parts of the Cook Inlet area. Other people checked swans and it became apparent that the Trumpeters were mostly a bird of the forest lands and the Tundra swans (called whistling swans then) were mostly found out on the tundra habitat. So, eventually changing their name to Tundra swan was appropriate. They might have changed the Trumpeter name to forest swan, as far as Alaska was concerned. Around 1957, Hank Hansen decided that we needed to do a complete Trumpeter count. He also funded a production study that was done by Pete Shepherd, on the Copper River area, as a graduate student at Washington State University. Shepherd was a really good field person and he produced an excellent land study of Trumpeters and their habitat on the Copper River area. We tried to do a population count and all of this was presented in *The Trumpeter Swan in Alaska* Monograph, published in 1971, so that is a matter of record. When Hansen left to go back to Washington, he kept urging me to do a better swan count. We did keep up a little bit with doing some swan work, trying to catch some for banding and documenting where they were. In 1968, I set up a complete census design. I couldn't find out how we had come up with the 1500 swan number that we had recorded back in the 1950's, so I wrote up some more specific instructions for the census. The Service game agents were going to help with these counts. They were instructed that they should mark the track of the airplane as well as where they found swans on maps so that it would be possible to tell if there were areas that appeared to be overlooked for swans. Avril Thayer did the Fairbanks area; Ray Tremblay did the Cook Inlet area; Jim Bartonek and I did the Copper River Delta, Copper River/Gulf Canyon area, the Gulkana area, and part of the Cook Inlet area. That comprised the 1968 count. A few years later, Hank came back as Assistant Area Director in Alaska and he was the one who decided it ought to be done every 5 years. So, that resulted in the 1975 count. I wanted to start doing some work on the North Slope, because we could see the oil industry "raising its talons" up there, but Hank was determined to have another swan census. I didn't have any biologists in my office at that time and so Hank hired a guy, a temporary, to help and we did most of the 1975 count. Bruce did a good part of the 1980 count with me and we are still following the same instructions that I wrote out for the 1968 survey. After that, it was all Bruce. (Laughter)

BC Well, I did get involved in the 1975 census, a little bit, because Jim, I guess at the end of his count, asked me to go up and look in the Chilkat Valley, because he knew that there were swans there. I took the airplane that I had in Juneau (with River Basin Studies) up there and did find a pair of swans, all that were there in 1975. Then, like Jim said, I started doing it with Jim in 1980. After he retired in 1983, I became the point person to put this census together every 5 years. We've been keeping it going and the year 2000 census was especially difficult to "pull off" because of concerns over the cost of the survey. But, we were able to put it

together again, with some partners to help fund it, and we did get it completed. Then, I think largely because of the concern over the die-off of swans in western Washington from lead poisoning, it was not such a difficult job of convincing folks that we needed to complete the 2005 census, the one we just completed last year. We took a writer along on part of the census. He is actually a freelance writer and he has an article written for the Smithsonian Air and Space Museum magazine featuring airplanes being used for counting swans. It is supposed to come out either this month or next. So, we had him along on the trip last year and I had him with me quite a bit. We are looking forward to seeing that article (it was published). The other development that happened was that Jack Hodges developed a computer program that we could use to enter swan data right into computers in the airplane. This saved the step of recording swans on paper maps (which Jim initiated) and then, later in the office, transferring the swan data and airplane track to a computer. So, there again, it was making it a little quicker and easier to get the data into a computer. Also the moving maps, that Jack developed, we can display right in the airplane as we fly. They enable us to see the track of the airplane automatically as we are flying and see how much coverage we are obtaining. Also every entry, as we make it, shows up on the computer screen. It has been a really remarkable survey with quite a history! It doesn't have quite the prestige of the continental waterfowl breeding pair survey, because it hasn't been going on for as long with continental coverage. However, we like to think that the Trumpeter swan census in Alaska is the most detailed survey of any wildlife species of that population size in the world, where you are going out and actually counting every one. No sampling is involved at all.

JC: Talk a little bit about what you've seen in all of the years that you have been doing that. Things like changes in the swan distribution and the numbers.

BC Well, there are two basic things going on. In really good swan summer habitat like in the Gulkana area for instance (it's down in the bottom lands, at about the 2000 foot elevation), there is a lot of really good small pond habitat there and one would think that it has all been occupied. But, when you come around 5 years later and you survey it again, low and behold, there are even more swans packed in. At the same time, at and even above the 2500 or 3000 foot elevation (where we used to think, when Jim was doing it, that you didn't need to look for swans, because the swans weren't going to be up there) we are now finding them. Well, maybe it is global warming or maybe it is just the pressure of more swans or both, but they are moving into higher and higher elevation habitat. So we have to look at a bigger area and we do find more swans. Because of that factor, it becomes a little difficult to explain the increase in numbers scientifically. The statistician folks think that because you didn't look in places before that you now find swans in, that you can only validly compare the areas where you have been looking for swans every survey. We like to explain that we didn't look in those areas in the past, because we knew that there weren't swans there. It's not that there weren't any there, perhaps just maybe the odd one or two, but there wasn't a "big slug" of

them there. We knew that because we get around every year on the spring waterfowl breeding pair survey and we get to look at a lot of the country, swan habitat each year. For instance, we knew that the upper Tanana that we'd fly over each year, did not have any swans there in the early years and now there are lots of them. I don't know what the number is, but it is 500 or more swans up there now, in the summer, and the same thing is going on in the Chilkat Valley. I found that one pair there in 1975 and now we have over 100 swans there in the summer. Wouldn't it be really nice to know if those we find there now all came from that original pair? Those are examples of areas where swans have moved into, what we guess, was empty habitat or became swan habitat because of global warming.

End of tape