

Oral History Interview with Bruce Conant

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Roger Kaye, Fairbanks, AK

RK – ... This is an interview with Bruce Conant, US Fish and Wildlife Service waterfowl biologist, who's retiring this year; it's May 22, 2006; this is Fairbanks, Alaska; and I'm Roger Kaye with the Arctic Refuge. Well, Bruce, thanks for conducting this interview with us. I've been looking forward to this for a really long time. We're going to talk about your career with Fish and Wildlife Service – flying in the Waterfowl Project. But first, I'd like to ask you to tell a little bit about your early history: where you grew up; where you went to school; and what led you to Alaska.

BC – Ok, Roger. Well, I grew up on a small dairy farm in southeastern Michigan and here is maybe one of the things that might relate to what I've been doing for the last 30 some years. I went to a one-room school there, which there aren't a lot of anymore. We had a very interesting teacher in the sixth grade who wanted us to learn about aviation. She had us all make models of airplanes. I made a model of a Cessna float plane and I may have not known it at the time, but perhaps that was the beginning of my eventual career.

RK – Really?

BC – Yes, of all things.

RK – Was this a balsa wood and paper model?

BC – Yeah.

RK – It wasn't the plastic type?

BC – No, it was all just a pile of wood and tissue paper when I started.

RK – Did it have rubber band propeller?

BC – Yep. Then we, as a class, did projects to make money so we all could fly to our State Capital in Lansing, Michigan. We only made enough money to fly one direction. I can't remember in what kind of airplane, maybe a DC-3, or maybe the one that became popular after that. But, anyway it was a propeller airplane.

RK – Yeah.

BC – Then we all rode back in a bus.

BC – So, maybe, all that had something to do with my eventual interest in airplanes.

RK – Interesting. First, what year were you born?

BC – I was born in 1945.

RK – ‘45. Ok. And were there any childhood books that influenced you in terms of wildlife or aviation?

BC – Well, I can’t remember many books. I read some of Jack London’s and maybe some Robert Service poems. I do remember, in high school, we used to go to a little lunch counter, downtown in the drug store, for lunch. We took our sack lunches and got a soft drink. While there, I’d look at the magazine rack where I found a magazine called the *Alaska Magazine*. So, I started thumbing through those. I was interested, of course, in the outdoors, from growing up on a farm. *Fur, Fish and Game* was another magazine I discovered.

RK – really?

BC – I looked at those and ...

RK – Well, that’s an interesting commonality. So many people that get into wildlife read that as a kid; and I did.

BC – Then, of course, I noticed the little advertisement in the back about the North American School of Wildlife and Forestry – or whatever it was. ‘Become a game warden in the wilds of wherever’ and ‘anybody can do it’ and ‘give me some money’ But, anyway

RK – Did you enroll in it? Or you just kind of ...

BC – I just ...

RK – ... read it?

BC – ... read it, and noticed that as a possible career. After graduation from high school, I went to Michigan State University and found out about a major called ‘Fisheries and Wildlife’ then, I’m not sure it’s the same now, but anyway, ‘Wildlife Management’ it’s known as in a lot of schools. I enrolled in that and completed my degree there in 1967. The last year in college, I managed to find a summer job in Alaska, working for the Alaska Department of Fish and Game (ADF&G) as an aide counting salmon on a salmon stream at Bear Lake, Alaska, which is out on the Alaska Peninsula. I flew all day to get to Alaska. We finally landed at Kodiak and I spent the night. Well now that I think about it, it was at least two nights, because the flying weather was bad. Then I was flown out to Bear Lake in a Grumman Goose by Dave Klingbeil, a well known Goose pilot, who wore the French beret. We landed at Chignik, I remember, because the flying weather was bad. We spent a few hours there and then he finally took us the rest of the way to Bear Lake. I worked there all summer along with another student (Gary Hettman) from Oregon State University. A guy

named Marve King, who actually came up from Michigan, flew in our supplies and mail in a Piper Super Cub every two/three weeks. He had a son, Eddy King, who had a flying service and big game guiding business in Naknek. It was obvious that aviation was a pretty important thing in Alaska, so I got more interested in the aviation connection. But, to back up a little bit, I did get my private pilot license with the flying club at Michigan State University the spring before I went to Alaska.

RK – What kind of plane did you learn in?

BC – A Cessna 150.

RK – Oh, yeah. Early one, must have been.

BC – Yeah, an early one. I remember my first lesson with instructor Roger Odell. We took off on a grass strip, at Davis Field, just north of East Lansing, and it was one of those deals. When you make that first take off you can (most people usually can) remember it. It was a pretty neat experience and I was “hooked.” Well anyway, after I finished that summer job, I had one more quarter to finish for my degree. I did that and I had a job lined up to come back and work for ADF&G, a permanent job with the Fisheries Department in Kodiak. Back then the Vietnam War was going pretty “hot and heavy” and people like me were subject to the draft. So, I decided that I didn’t want to take a chance on that even though I wanted that job in Alaska. I didn’t want to come up and then get drafted out of it. I decided to try and get something positive out of the military. I wanted to join the Coast Guard and pursue their flying program. But they only had a class every six months, because the Coast Guard is a small branch of the military. So, I ended up joining the Navy, in 1968, and continued to learn how to fly in the Navy. I did that for three years.

RK – And what did you fly?

BC – I flew the T-28 and the S-2 tracker in training. Then I was stationed in a target towing, or target squadron, in Puerto Rico, that provided target services for the Navy. We had the T-28 to simulate close air support and the S-2 to tow targets for ships to shoot at. I was training in the P2V, which carried miniature airplanes, one under each wing. After dropping them, they could be flown remotely, which is what we do nowadays, over in Iraq. But, that was the early days of that sort of thing and they were used only as targets back then. Then, because the Vietnam War was winding down, they were offering early outs, as they called them. I volunteered for one of those and got out of the Navy in 1971. I went back, briefly, to the farm in Michigan. Then, because of my interest in Alaska, I decided to drive up the Alaska Highway that spring, and look around. I wanted to see if I could find some means of employment. I stayed at the old Fireweed Hotel in Anchorage – 32 bucks a week. {Laughter} Other people were there, young people looking for adventure in Alaska, and employment, and so forth. I did some traveling around Alaska. I went to McKinley Park (Denali Park) and drove up to Fairbanks, wandered around on the road system

looking for possible employment. Also, I took some tests, to try to get into a Flight Service Station job with the FAA (Federal Aviation Administration). I also visited the Regional Office. I remember, I went in and talked with Dave Spencer.

RK – That's Fish and Wildlife Regional Office?

BC – Yeah.

RK – Oh, Dave Spencer now, he was what ... Chief of Refuges?

BC – I suppose that he was Chief of Refuges then. It wasn't at the old downtown office, but was somewhere outside of town. The reason that I went (I think somebody tipped me off) was to see Mel Monson about a job. I went in but Mel wasn't there at the moment. I remember I talked with Dave for a little bit.

RK – Tell me about Dave Spencer ... what was your impression of Dave?

BC – Well, Dave was a real, how would I put it, a reserved person who had a real perspective on Alaska. He'd been around a while and knew things about Alaska at a deeper level than somebody just talking about geography. Eventually, Mel did show up and I went in and talked with him. Mel was personality wise, a bit the other direction from Dave. Mel had a real energetic and overflowing type personality. They both said that there were some possibilities for a job sometime in the future, maybe, and to stay in touch. I think right after that, I got my float rating out at Lake Hood on the GI Bill. It was in the fall, in September/October, sometime about then. I got in touch with the FAA folks and they offered me a job as an air traffic controller, sitting in front of radar screens all day. I said, 'naw, if I was going to do that, I wanted a Flight Service Station job somewhere out in the bush instead. Well, they didn't have any of those jobs open. Then this guy that I was rooming with in Anchorage (he was a flight instructor where I got my float rating) decided, around about Christmas, to head south. So, I went down with him, because it didn't look like anything was going to happen, employment wise, through the winter. He had lived in the San Francisco area, so I went down there for a couple of months. After that, in the spring, I went back to Michigan. I was thinking 'well, probably things aren't going to work out in Alaska.' While going to school, I had worked in the summers on a job with the local County Road Commission. So, I called up and asked them what the possibilities were for a job. They said 'yeah, you can come back to work for us.' They had a job for me driving a dump truck. Then, out of the blue, Mel Monson called, about the end of March and said 'we've got a temporary job in Fairbanks with Fisheries with the predecessor to Ecological Services, which was River Basin Studies'. I told him that I'd think about it. So, I had a permanent job in Michigan and I had this temporary job in Alaska. I discussed it with my folks. I remember my mom said something like 'well it's not a permanent job, but it's in something you've studied in school, it might just work out, you ought to give it a try.' So, I decided to come up and take the temporary job in Fairbanks. I worked at that for a couple

of months. Then Mel called up and said 'we have a permanent job available in Juneau.' He knew I had a pilot license. That's something Dave and I discussed, and Mel and I had discussed, the previous summer. I'm sure that's why I got hired, because it was hard to find wildlife jobs in those days.

RK – Now what year was this – '72?

BC – This would've been the spring of 1972. They said 'we need you to go down to Lake Hood and get checked out in this Beaver' – a standard, piston, deHavilland Beaver – 'that we're going to have stationed in Juneau.' I remember, I asked if I could take the train down and they said 'well, it's kind of unusual, but, yeah, we can do that, the government will pay for it.' So, I took the train down to Anchorage. It was a real nice, all day trip. Then, I showed up at Lake Hood and found out about the Fish and Wildlife Service Aircraft Division, which was run by Theron Smith.

RK – Yeah, tell me about Theron Smith.

BC – Well, one interesting story I know about Theron, with me, is that after I got trained and people said I was okay to take the standard Beaver down to southeast ...

RK – Now, you just had a private license at this time?

BC – No, because of my Navy experience (I don't know how it is now, but back then) you could go in and take a 40 question, written test with the FAA. If you passed, being a military pilot, the FAA would give you all the ratings that you had in the military.

RK – Oh, I see. Ok.

BC – I got the commercial, instrument and multi-engine ratings, because I passed that test and because of all my military training.

RK – Ok.

BC – I had those ratings and I just barely had a float rating. So, I was covered there because the Beaver they wanted me to fly was on amphibious floats. Anyway, I was going to take this Beaver down to southeast, so Theron called me into his office and we sat there and talked about how flying would be in southeast. I remember that he was very similar to the way Dave Spencer would just sit there and slowly, calmly, talk about his experience. He was telling me, 'you know, some days it'll be like flying around a mill pond down there, flying around southeast, but other days you better know what you're doing. Try to ease into it, don't tackle anything too tough to start with, and talk to all the people you can who have flown around down there, get to know the country.' It was good advice and the way he delivered it was, you know, this is what I really ought to pay attention to. Not some 'high falutin', flying off the handle, showman type pilot that's trying to impress you. You could tell that he was somebody who was speaking from lots of years of experience.

RK – Now was he a Service pilot? Was this before OAS (Office of Aircraft Services)?

BC – This was before OAS. Theron was a pilot and also the head of the FWS Aircraft Division. That really goes back to Clarence Rhode, who was the Alaska Regional Director, who I never met because he was killed before I showed up on the scene. But, according to the stories of Jim King and others, it was Clarence's dream to have an Aviation Division in FWS. Because he was, I don't know if he was then, but he was going to become the Alaska Regional Director. He hired Theron Smith to create this Aircraft Division for him. So, it was really Clarence's idea, but Theron's "baby", in terms of making it all happen. I heard on the radio, not too long ago, that 'it's easier to come up with ideas, but it's harder to find the right someone to make them all happen.' So, that's my most memorable experience with Theron Smith. And that was the fall that Begich and Boggs were lost.

RK – Oh, I see.

BC – So, it probably was Theron that said, 'by the way, on your way down, why don't you look for them,' because I was going down the coast from Anchorage to Juneau. That was the route that they were going to take. 'Keep your eye out for anything that looks like an airplane.'

BC – I remember that the weather was a little crummy, so I stopped in Cordova and spent the night. Chuck Evans was there with a FWS Goose helping with the official search for the Begich and Boggs airplane. I had supper with him that night and he gave me a few pointers about flying. I remember one thing that he said was (I'd just come through Portage Pass) 'ah, you know, that Portage Pass can be a pretty crummy place.' It was a nice day when I came through Portage, but I remember him saying that 'Portage Pass is only open for me if I can see water on the other side coming through from the Turnagain Arm side.'

RK – Oh, yeah?

BC – He was saying, 'just because it's supposed to be open, if you can't see the other side, don't go through there.' Anyway, I continued on down the next day with the airplane and was stationed down in Juneau, with the standard Beaver. Mel Monson was a builder, which was what Theron Smith later said about Clarence Rhode being a builder, you know, build up the program. That's why he sent me off to Juneau. Mel was into building up the program in southeast. There were only two full time ES people or River Basins people there when I showed up. Jim King was there with the Waterfowl Project. Fred Robards and Sid Morgan were the law enforcement/eagle people there then. It was Mel's idea to station an airplane down there and to hire a pilot/biologist. Then, shortly thereafter, he got a 65 foot "T" boat the – *Curlew* – which is a sister ship to the *Surfbird*, which was already there with the eagle project. I got "drafted" in December of that year to be boat crew. Ted Estrada was the newly-hired boat skipper for the *Curlew*. The *Curlew* was the *Cripple Creek*

at that time, in Kodiak as the Commercial Fisheries Service boat and it was being surplused. So, they needed some crew members to help bring the boat across the Gulf of Alaska to Juneau. Ted, the skipper, went ahead to Kodiak to get the boat ready. George Putney was skippering the other sister ship, the *Aleutian Tern*, out in the Aleutians, but stationed in Kodiak. He was going to be the other skipper helping Ted. Because I and Don Ross, a newly hired ... Mel Monson newly-hired pilot/biologist ... were both pilots, obviously we knew how to steer a ship and maintain a compass course. So, we were both “drafted” to help bring this boat across to Juneau.

RK – So, Don Ross was down there in Juneau, then?

BC – Don was stationed in Fairbanks. You should, at some point, get him to tell about how he got hired. I think he was hired by Mel a little after me and he was hired to work in Fairbanks with River Basins.

RK – Ok, yeah.

BC – Anyway, Don was onboard and we were both pilots so we got “drafted” for this trip. As it turned out, we lucked out with the weather. It was a four-day trip and the roughest part of the trip was coming up Lynn Canal, in the dark, in 12-foot seas or something close to that. But, we were headed straight into them, so it was a pitching motion instead of a rolling one. But the Gulf of Alaska was almost calm. I mean, as calm as it ever gets – especially that time of year, so

RK – Did Jim King help you flying? You’re a new Service pilot; new to floats; did he check you out, and give you advice?

BC – Yeah, I remember, we made one trip together. It was probably at Theron’s urging to make a trip with me in southeast. Jim pointed out some things to me that he knew about flying in southeast. Jim had flown a little bit there, but not as much as say, Al Kropf. He was a guy that flew a Grumman Goose in southeast in the summers and worked as a mechanic in the shop there in the Fish and Wildlife hangar in Anchorage in the winters. I remember talking to Al quite a bit, because he was in the shop there, building an airplane and just retiring. He told me a lot about flying in southeast, like be careful about pulling up on beaches. I remember him saying ‘just because it looks good, don’t just put your wheels down and pull up there. You should be sure you get out and walk around on it before you pull an airplane up on a beach.’ I learned from the local people where to beach an airplane and where not to. Jim’s experience was really helpful to me later, flying around all of Alaska, because he had such vast experience with the whole Alaska countryside.

RK – Well, Bruce, several years ago, at an OAS meeting that we had, I heard you talk of your “trail of mentors.” Maybe this is a good point to talk about that.

BC – Well, that’s what Jim King pointed out to me, that I was a product of a “trail of mentors” and himself being in the trail. That’s when I had been flying with Jim on the Waterfowl Project for maybe a couple/three years. He told me that ‘experiences that I’m passing on to you were passed on to me,’ and that I should know my “trail of mentors.” That is: “I” (being Jim King) ‘learned from Ray Wolford,’ a Management Agent I guess they were called in those days, here in Fairbanks. He was the Head of the station here, and Jim said ‘I made trips with Ray when I was just learning to fly, not even handling the controls, but just watching him make decisions.’ Then maybe Jim would fly the airplane back into Fairbanks after they’d done their patrols. Ray had learned from Clarence Rhode, who was a well known bush pilot before he became, well ... even more well-known as the Alaska Regional Director of the Fish and Wildlife Service. Clarence Rhode had learned from Sam White. Sam was the first person to use an airplane in his job, certainly in Alaska, and maybe the whole Service – in the Fish and Wildlife Service. Sam White learned to fly from Noel Wein. So, that is the “trail” and it goes back to the 1920s. And, like I think I said in my meeting speech, Noel Wein learned it the hard way – on his own. But anyway, those things learned were passed along and I like to think that I passed some of those on to Jack Hodges, who had a wonderful career as a pilot/biologist with the Waterfowl Project in Juneau and just recently retired.

RK – And now you’re teaching Ed Mallek.

BC – And now Ed Mallek is going with me and I’m trying to pass on a few things to him that I know, because, he’s going to start doing this spring waterfowl survey in Alaska that I’ve been doing since ‘78. I just mentioned to Jim King, the other day, that this mentor apprenticeship idea is something that is really important. It’s bigger than aviation, but it is especially important in aviation. I told Jim that I learned to drive a John Deere tractor from my dad. When I was five years old I would stand between his legs and get to drive the tractor coming up from the field. I remember my dad said “well, when you’re 12 years old and you can” ... you had to start it by swinging the fly wheel to get it started, so ... “when you’re old enough to swing the flywheel, you can go and do some work with the tractor on your own.”

RK – Yeah, well, maybe I’ll ask you to talk about the Waterfowl Project that you’ve been involved in all these years. And I believe that’s where I first met you in ‘78, in Fort Yukon. You and Jim King were doing the Spring Waterfowl Survey and I went up to Old Crow with you and we did the Old Crow Flats. And it was with the turbine Beaver. I think you were just learning from Jim at that time, weren’t you?

BC – Yeah, I had just taken a position, working with Jim on the Waterfowl Project. Before that, I was with Ecological Services. I flew the standard Beaver for three years with them there in Juneau and then found out about the Flyway Biologist Program, which is the counterpart to the Alaska Program, but for the whole continental U.S. with surveys also in

Canada and Mexico. I managed to find a job down there with that program and I worked down there for two years.

RK – Where's down there?

BC – In the "Lower 48."

RK – Oh, okay.

BC – I was stationed six months at Laurel, Maryland which is where most "trainees," as they call them, start out and I flew surveys with Art Brazda up in northern Canada. He was stationed in Lafayette, Louisiana. I eventually moved down there and worked with him for a year and a half. So, that's where I really learned a lot about the Continental Waterfowl Program and how to do aerial surveys for waterfowl, although I had made a trip with Jim King while I was still with Ecological Services in Juneau. He was up here doing his annual spring survey that I'm doing right now. I met him here in Fairbanks and he said 'well, why don't you come up to Yukon Flats with us'. Dan Timm was with him - the State Waterfowl Biologist, at the time. So, I went along in the backseat and saw a bit of how they did it. Then, of course, talking with Jim in the office in Juneau, I got interested in waterfowl. Anyway, that's how I sort of got into it. Then, when I was stationed in Louisiana, I had the opportunity to come back to Alaska. They had two positions – one in Anchorage working on the NPRA (National Petroleum Reserve Alaska) and the other one in Juneau working directly with Jim. Rod King was hired for the one in Anchorage, which was subsequently moved to Fairbanks, and I was hired for the one working with Jim in Juneau.

RK – I see.

BC – So, I had just started with Jim in February of 1978 and the '78 spring survey, when I met you, that was my first spring survey.

RK – Tell us about the extent and the purpose of this Spring Waterfowl Survey. It's across Alaska, right?

BC – Well our part ... it's across North America, actually, and our part is mostly in Alaska and also the Old Crow Flats in the Yukon Territory. This is the 50th year of doing this survey up here. People like Cal Lensink were involved, early on, to help design it. The history of it is that Dave Spencer worked as a Flyway Biologist down south and he moved to Alaska. They didn't call them Flyway Biologists at the time; I think he was actually stationed on a refuge in Florida. He was involved in early survey work on the prairies, in the late 40's, to help develop an aerial system for counting waterfowl. Jim King likes to say, 'Dave, because of his forestry training, is the guy who came up with the "segmented transect" sampling system.' The whole survey system was developed and eventually turned into this continent-wide survey that's done every year, at this time of year. Also, Dave Spencer flew the first waterfowl surveys in México. Then, I've heard Dave say, he got a chance to come

to Alaska. He said that it didn't take him very long to make that decision and he came up. I think that's when he became Manager on the Kenai Refuge. But, he also flew surveys out on the Yukon Delta, the first surveys for waterfowl out there with an airplane and wrote a paper about his work there—*America's Greatest Goose-Brant Nesting Area*. Then, I think it was probably Clarence Rhode that had the idea to have a Waterfowl Project, per se, in Alaska. He found and hired Hank Hansen in the state of Washington – he was the State Waterfowl Biologist down there. Hank came up and started the actual Waterfowl Project in Juneau, which (some people don't realize) used to be the location of the Regional Office of the Fish and Wildlife Service. So, Hank got the project going and established this spring survey as part of the Continental Program. Jim was working as a Game Agent here in Fairbanks at the time. When Hank showed up, he was using Game Agents to fly him around on various parts of the Survey. After a couple of years of that, Hank announced that he was going to do the whole thing himself, because he was also a pilot, a World War II pilot. Jim said, at the time, the old Game Agents sort of scoffed at this idea, that one crew could not count on flying around Alaska, in three weeks, without running into major weather problems, and not getting this whole thing done. But Hank went off and he did it. Then, he did it the next year. Jim says the Game Agents begrudgingly said 'well, only at this time of year could it possibly be done.' So, Hank set the pattern. Anyway, that's how Jim got involved in the Waterfowl Project, working with Hank. Then, when Hank decided to go down to the "Lower 48" and run the Continental Program, they lined up Jim to take over the Waterfowl Project here.

RK – I see.

BC – And I followed Jim.

RK – Now when did the turbine Beaver come into this Project?

BC – Well, Hank and Jim used a number of airplanes through the years. Then, I think it was about '64, the Service picked up some surplus Beavers from Davis Monthan Air Force Base, which is a graveyard of surplus military airplanes down in Tucson, Arizona. Jim was one of the pilots that helped fly them up. Theron Smith and Jerry Lawhorn went down there and "un-pickled" them, got them ready to go, and Jim and others flew them up to Alaska. Jim flew the standard, piston Beaver, I think for 9 years, on this Waterfowl Survey, and he took some notes about the things that he didn't like about the standard Beaver. Jerry Lawhorn, who was the Chief of Maintenance with the FWS Aircraft Division, a superlative mechanic in his own right, but especially a good manager of people and mechanics in particular, took some of these notes to heart. They (FWS) had one of these surplus Beavers they specially set aside to not use on regular work. They just parked it, or kept it somewhere in a hangar, with the idea that someday they were going to make it into a turbine-powered airplane. When that time came along, it actually followed the modification of a Grumman Goose (N780). That came first – they converted a regular

piston-powered Goose to turbine power. That's because of a trip that Theron made with a congresswoman who was running a committee back in Congress that controlled the "purse strings." The story that I heard was, they were stuck on a lake, in poor flying weather, out in Bristol Bay country somewhere and she needed to get back to Washington to vote. Theron said (in a way that he could say really well) 'well, if I had some turbine engines on this airplane, I could climb off this lake and you'd be in Anchorage in an hour and a half, but because I don't, we're going to sit here in the fog and rain and wait.' She remembered that and, when she got back to the Congress, she put a little thing in the budget for the Aircraft Division and that kept coming year after year. So that's where they got the resources to convert the Goose. They wanted a spare engine for the Goose and that was the third turbine engine. Jerry Lawhorn said 'well let's not just put it on the shelf, let's put it in a Beaver and make it work and if we ever need it for the Goose we can go get it and put it on the Goose.' So that's why it's got the long skinny nacelle, because that's what's on the Goose. As it turns out, it works out really well for us, because it gives us superlative forward visibility, you can see right alongside the engine nacelle forward. That happened in the late 60's, early 70's. 1972 was the first year that it flew – April of '72. A company called Volpar, which has since gone out of business, in Van Nuys, California, put the engine on the Beaver airframe. Jerry went down there, did some of the test flying and flew it back to Alaska. So, that's how it got started. It's (N754) history is well documented in a voice tape (that has been transcribed) made by Jerry Lawhorn. I had seen N754 when I first showed up at the FWS hangar in Anchorage. It was sort of in pieces in the shop and it was an interesting looking airplane. Jim, I think, pointed out to me that it was going to be used for waterfowl survey work, eventually. I've heard Jerry tell the story that he went with people like Jim and watched what they were trying to do with an airplane. He tried to design special things into the airplane. In other words he tried to make it simple to operate, because the pilot is spending a lot of time looking outside the window for waterfowl. For instance, Jim, with the old standard Beaver, had Jerry move the fuel pressure warning light right up by the front door post, instead of down at the bottom where it normally is located.

RK – Oh, I see.

BC – So, if you have low fuel pressure, this light came on right by your eyes, near your line of sight when looking for waterfowl. So Jerry, when he built the turbine Beaver (N754), he put all the annunciator lights (as they call them) right up on top, where they could immediately catch your attention if you're spending a lot of time looking outside. So, those things are all designed into it. In 1972, I got in on the tail end of the old Fish and Wildlife Service Aviation program. Theron was retiring and I remember asking him about what was going to happen, in our little discussion back then. He said 'they're talking about this Interior consolidation.' He said, 'I think it's going to happen.'

RK – That's OAS?

BC – And that's what turned into OAS.

RK – That's the Office

BC – Office of Aircraft Services, which managed all the Interior aircraft in Alaska. I was flying the standard Beaver then and times were changing. Jim was going to start using the turbine Beaver and he did. He made a trip with Jim Bartonek, to look at lands for what eventually turned into what were called D2 lands then, but eventually turned into ... some of the lands turned into new National Wildlife Refuges. Jim King was looking over the land with Jim Bartonek and writing up proposals. Jim was also supposed to start using N754 on the Spring Waterfowl Survey. But that stalled, because of this Office of Aircraft Services, and the fact that this airplane does not have a "certificate of air worthiness" from the FAA. That bothered a lot of their people. So, the airplane was not in flyable shape and it didn't look like they were going to put it into flyable shape. It just sat parked there at the old Fish and Wildlife Aircraft Division yard. Hank Hansen, who of course had been the Project Leader of the Waterfowl Project, wanted this airplane to be used. Hank was, at that point, Deputy Area Director for Alaska under Gordy Watson. So... the story is that Hank went and talked to the OAS folks and said 'well, if you're not going to fly the airplane' (it was the one airplane that OAS didn't take over ownership of, I think, because it was un-certificated), I'm going to send that airplane down to the "Lower 48" and they can start using it down there.' OAS started in Alaska and it was not going much in the "Lower 48", at that time. That must have embarrassed some people, because pretty soon they started to fix it up. In 1977, Jim flew it with Jim Bartonek on this spring waterfowl survey for the first time. They did the whole trip with this airplane. So this year, in 2006, it is the 30th year that this airplane will have made this trip around Alaska and up to the Old Crow Flats.

RK – How many hours does it have on it, doing this? Do you know?

BC – Well, there's somewhere between 12 and 13 thousand hours on it total– since they put a turbine engine on it. Well, of course, there's other work that's been done with the airplane, not just this survey. This survey takes about 100 hours, or so, of flying time. So, over 30 years, that's about 3000 hours of flight time.

RK – Yeah. Let me ask you, when the Fish and Wildlife Aviation Program went to OAS, was that an improvement in efficiency, or safety, do you think? Or not?

BC – Well, it was a confusing time, because, part of the history of it is that there was a counterpart to Fish and Wildlife Aviation in Alaska at that time and that was the BLM – the Bureau of Land Management program – which focused a lot on fire fighting. When OAS happened in Alaska, they chose the Regional Director from BLM to run it, partly at least, because Theron Smith was retiring. I forget the person's name, but the head person from the Bureau of Land Management moved over to run OAS. Well, Andy Andersen (he actually was a boat skipper of ours in southeast Alaska for many years – he recently died, but he

used to work as a mechanic in the old Fish and Wildlife Service Aircraft Division, in the winters, when he was still fishing ... or driving a fish tender out in Bristol Bay) said the history was, that whatever Fish and Wildlife did – BLM thought it was wrong. BLM thought that they did things the way they should be done. For example, the Grumman Goose that was converted to turbine power by Fish and Wildlife – we (Theron and Jerry) put Garrett engines on it. Well, BLM had Pratt and Whitney turbine engines on their Goose – the PT6 – and they thought that was the way to go. So, what FWS did was wrong. So, it was the same thing with the turbine Beaver. They thought it was a mistake. It shouldn't have happened. So, there was all of that tension happening back then. They were out to change things, or at least not have them go the way they had been going with Fish and Wildlife. Some of the people that I got check rides with, early on, were retired ex-military pilots. They didn't know a whole lot about what we were doing with airplanes or how we did it. They didn't show a real interest in trying to learn what we were doing either. I think that has improved a little over the years. But, like Jim King pointed out early on, there's a saying in the Bible 'that you can't serve two masters.' The setup with OAS put FWS pilots in an awkward position – because we worked for the Fish and Wildlife Service, but the Office of Aircraft Services was handling all the aviation part of it. We did check rides with them and they, over their history, have been coming up with more and more ... I won't say restrictions, but hoops that you've got to jump through, to be able to fly. For instance, requiring an instrument rating was one thing that happened early on. All Service pilots had to have an instrument rating. So, Jim went off to Ohio, with Don Fortenberry (who I just met three or four weeks ago at a retiree thing back at NCTC – National Conservation Training Center) to get trained up to get an instrument rating. Jim has said that it was the only instrument flying he ever did, just to get that rating. He came back to Alaska and did his flying the way he knew how to fly around Alaska. That is what he passed on to me. Ave Thayer was a person that at some point decided that he wasn't going to go that route and he did not get the instrument rating. He eventually quit flying for FWS. That was a loss – to my mind, and Jim's, and others – to the Fish and Wildlife Service, because he was an extremely competent, safe pilot, flying in the Arctic Refuge, knowing the country and knowing how to fly safely – VFR, and marginal VFR or special VFR (under visual flight rules).

RK – 7000 hours he had too. Never an incident.

BC – Yup! But it's a different perspective on what the flying around Alaska is about. Certainly there are new tools that have come along – like GPS, a satellite based Global Positioning System. It is a help in taking some of the worry out of getting places, but ...

RK – I want to talk to you about some of the improvements, or innovations, in technology. But first let me ask you, how many hours have you accumulated flying with Fish and Wildlife Service in 30 years?

BC – Well, let's see. I think I had about 900 hours when I came to work for the Service. I've got a little over 9000 now. So, there's a little over 8000 for FWS and over 7000 of that is in this turbine-powered airplane (N754).

RK – Oh, really?

BC – N754 is, by far, my favorite airplane and the one I know the best.

RK – Did you ever have an accident or incident with it?

BC – No, I never have. Not yet.

RK – Well time is running out

End of Side A

BC – One thing did happen on one of our spring surveys that could have been an incident or worse. Debbie Groves, our observer/GIS specialist in the Juneau Waterfowl Project and long time spring survey observer, was with me. We had just finished the survey and we had just fueled up in Gulkana. From Gulkana, we make the last, just cross-country leg into Anchorage and land at Lake Hood. We like to do a little celebration in Anchorage at the end of the survey, so I was thinking about that. I started the airplane up, after we fueled, and I went to move the power lever. It was just loose – like nothing there. Finally, I shut down and discovered that “under the hood” the power lever wasn't connected up front anymore. We spent the night in Glenn Allen. Mechanics came up the next day from OAS, in Anchorage, to fix it. Lo and behold, there in the bottom of the nacelle was a castle nut (the required cotter key, which should have been there, was not there to hold it on). It had just backed off at the moment I shut down or started the engine. When you think about all the times when I (and others) had the power back coming down a hillside, at a hundred feet over the ground, and if you went to put the power in, and it fell off then – that could have been a bad scene.

RK – Yeah.

BC – So ... that's one close call. I've only had one forced landing. That was with a piston Beaver (N728) in southeast Alaska. One of the piston's exhaust valve axle had fallen off the engine and it was back firing. It would still fly, a little bit, but it was clear that we would have to land soon. That was over calm salt water so it worked out OK and it was not a big deal, but

RK – Well, Bruce, you're ... in the Fish and Wildlife Service, you're certainly a legend. And I've known you from all these OAS meetings over the years. What would you tell Service pilots? What's most important? Say a guy's going to start flying for Fish and Wildlife, what's the most important advice you could give?

BC – Well, looking back on my career, the most important factor to me, in helping me learn to fly around Alaska, was working directly with Jim King for 5 years. Now, that was probably an unusual opportunity, but ... certainly being able to spend some time with experienced pilots that know their way flying around Alaska is extremely valuable. You don't even have to have your hands on the controls. You can learn a lot if you can just sit next to them and watch them make decisions, with an airplane, in difficult situations. That's why, I think, I like some of what's going on with the current program, which is termed 'mentoring,' but to me it's more like training. It's in short periods. I think a new pilot needs more. I would like to see a year overlap between every pilot position change in the Fish and Wildlife Service, so that you can spend time – a significant amount of time – to get to know the person and get to know how they operate as a pilot. Not that you're exactly going to follow everything they do, but you'll at least have the benefit of learning how they do it. I think Don Ross had another good example of this approach, learning from Ave Thayer, and it's unfortunate that Don left the Service. That technique is quite a bit about how it's done down below, in the "Lower 48," with the Flyway Biologist Program, where they do these waterfowl surveys across the continent. They typically put new people with experienced ones and have them fly together for a while. That's a "tried and true" method. And then ... I don't know ... certainly these new tools are nice, but you need to learn how ... pilots, I think, need to learn how to make 180-degree turns. Don't just assume that everything's going to work out just right and that you can push on or climb up and go on instruments, because you have an exact position and you know exactly where you are. Because, you know, that equipment can fail at times, and

RK – You're referring to, like, the GPS ...

BC – GPS.

RK – ... navigation? You think pilots are tempted to go beyond where they would have, just because of that security?

BC – I think there's that temptation. You should be mindful of it, anyway. You can fly safer, I think, as long as everything's working. The turbine Beaver is set up with computers, in the panel, with a moving map, thanks to Jack Hodges. We use Jack's program to record waterfowl, right into a computer, by GPS position. But it also has a moving map function, so you can see yourself fly down these survey lines on the survey. All of the USGS 1:250,000 scale maps can be depicted so you can get really detailed information on where you are, and how to fly around ... especially in places like southeast Alaska, along coast lines. You can see exactly the track of the airplane, in front of you, as you fly along the coastline. So if the weather all "goes to pot," you can turn around and fly the flight line back out.

RK – Back out.

BC – So that's helpful and comforting, as long as everything's working. But, don't fly way into bad weather thinking 'well, I can see that I'm right here,' because, maybe you're not right there. And maybe, worse yet, somebody else might be doing the same thing in the opposite direction.

RK – Yeah. Any other advice you'd give a pilot?

BC – Oh ... um ... when you're starting out, approach it slowly and cautiously, sort of feel your way into it. You know, like the advice Theron gave me, and Jim King, and others. It probably goes clear back to Noel Wien; don't make the most difficult trip right off the bat. Then, the older you get flying, I think you tend to fall back on that concept too, because your physical abilities are not as sharp as they used to be when you're starting out. So you, like an old basketball player or whatever, draw on your experience to make the trip, and do things safely but not by pushing your physical abilities.

RK – Well, we talked about technology a little bit, with the navigation stuff. But how about in terms of the Waterfowl Survey. It kind of came into the computer age during your tenure, didn't it? How's that changed the Survey, and the nature of biological work?

BC – Well yeah, that all happened in my day. When I started, the Selectric typewriter was the top of the line, for what we used to call secretaries in the office. When I started doing surveys with Jim King, we actually used an old Dictabelt voice recorder. I had learned to use cassette tape recorders in the "Lower 48," so then we moved to that technology, after I started with Jim. Then the computer age came along. For instance, on this survey ... (and we're still taking the paper maps along, for security, that I did – and Jim before me, and Hank before him – where you navigated holding the map in your left hand, and fairly precisely, by watching lakes and hills and rivers and creeks go by, to navigate down these survey lines, while you're counting ducks and talking into a tape recorder) we have the moving map right in front of us on a computer screen, that's got the survey line on it and has got the airplane track going down that line. We've also got the GPS unit, with a CDI (Course Deviation Indicator). Just like a VOR, you fly this line with this CDI and if you veer off to the left or right, it shows you immediately. You can fly precisely down survey lines talking birds into a microphone (attached to the computer), like a tape recorder, only every time you push the button we get a GPS position attached to it. Well, this is all thanks to Jack Hodges, who worked with me and recently retired. Among his many talents, he is also a computer programmer. Over a period of time, he programmed this all to work for us. It's being used across the continent now, by all the survey crews, to navigate with and to also record duck observations by GPS position. And with the GIS (Global Information System) capabilities, you can do lots more with the waterfowl data than just ... there are so many duck observations between these two points. You have GPS positions, so you can draw nice waterfowl population density maps and so forth, by waterfowl species. So, this technology has taken a load off the pilot, especially on these surveys, because you don't

have to pay so much attention to exactly where you are to stay on line. Pilots can spend more of their time looking out the window for waterfowl. And, of course, watch for anything that you might run into at 150 feet above the ground. It's improved both the safety and the ... oh, the comfort of the pilot. You are less fatigued, which is a safety factor, and you're But, yeah, that's all happened in

RK – In your career.

BC – Our careers ... the whole small computer industry ...

RK – Well, the computer technology aiding the survey design and implementation, and navigation equipment, is just wonderful. And we wouldn't want to go back. But has anything been lost in terms of the nature of flying – the skills that pilots, today, that are coming up, that may not have, that you had when you started?

BC – Yeah, I suppose. I'm not sure how pilots are trained now, but if they go immediately to GPS and don't learn how to navigate on paper maps, especially USGS scale maps, they are missing something important. You can learn a lot about the countryside by just paying attention to river drainages and places, and, you know, part of the history of Alaska, really. So, if you are just concentrating on how to get to a place, without enjoying the ride or “smelling the roses along the way,” maybe something has been lost. And, like I said, if it all quits, don't just ... you don't have to just give up. People have learned to get around the country, in an airplane, with paper maps for a long time.

RK – Well, there's a few other surveys that you've done besides the big one that we've talked about. Maybe you could mention a little bit about the Trumpeter swan surveys and your Mexican surveys that you did.

BC – Okay. Well, the Trumpeter swan survey was actually started by Hank Hansen after Mel Monson officially described Trumpeter swans in Alaska. There were some sporadic records of Trumpeters, but Mel Monson actually measured some eggs on the Bremner River, up the Copper River drainage, and wrote a paper that proved that there were Trumpeter swans in Alaska. Hank got a field program going with Pete Shepherd to study Trumpeters there and Hank organized a survey to try to count them. Trumpeters, at that point, were considered ... they weren't actually on the threatened species list, but they were considered in real short supply. The only ones known down below were at the Red Rock Lakes Refuge in Montana. So, Hank organized the first Trumpeter survey up here. Then Jim King, in 1968, under Hank's encouragement, developed a more comprehensive attempt to try and count all of the Trumpeters in Alaska. Then, based on the results of that survey, folks felt better about the status of Trumpeters. The survey was actually a census, the way it's done. It's accomplished in late summer by flying back and forth, across all of the habitat, looking at every possible wetland out there – creek, drainage, lake or pond – where Trumpeters might be found. Swans show up fairly well from the air, so it's a really

good count. Based on the results of that census, which found a little less than 3000 swans, the Service breathed a sigh of relief on the status of Trumpeter swans. So, somewhere along the line, after that, it was decided that every five years we would do ... try to do a North American wild Trumpeter count with Alaska, having the biggest proportion of Trumpeter swans in the summer, as a major part of that. So, the census has been done every five years since 1975 and we just completed the last one in 2005. Because Trumpeter swan numbers have increased dramatically, it's taken an increasing effort to get the census all accomplished. In 1975, Jim flew almost the whole thing himself, with another person in the airplane. Since then, we've relied more and more on refuge folks to help out. Flyway Biologists and ... oh, the Army helped a few years. The Forest Service does some counts down on the Yakutat forelands. So, that's a major flying effort that's accomplished every five years. Because of the computer age (and Jack Hodges), swan observations and locations, originally put on USGS maps by hand, can now be entered directly into a computer as we fly. The Trumpeter swan census is a major survey in Alaska. Another one I've been doing, every year since 1982, is the México West Coast and Baja California Survey. I started doing that when I was actually still with the Flyway Biologist Program down below. When I got back to Alaska, somewhere it was decided that I should stay involved in that survey. Eventually, when Duane Norman retired, I started being the lead person on that survey and I've been flying it every year since 1982.

RK – Now, do you fly the turbine Beaver down for that?

BC – In 1986 we took the turbine Beaver down for the first time. I had used various amphibians, like the Cessna 206 and 185, previously. I think it was one year after that we didn't use it, but then every year since about '88 we've taken it down to do that survey. I like that airplane also because it is so unique. It's noticed wherever it goes. It has various nicknames – a common one up here in Alaska is "Pinocchio," because of the long nose. But, in México they call it the "Grande Mosquito," because the nose looks like a proboscis sticking out there. So, it's been helpful to me, because it can be a bit complicated flying in México, all the formality of flying down there. But when they see that airplane they say, 'oh, you're back again.' It makes it easier going through Customs and dealing with the Military and all the rigamarole down there. Because most of the black brant (now Pacific brant they're called), spend the winter in México, that's where we get our best count of the population of brant – the west coast brant. So, the brant count is the major focus every year. Every third year now, they send other crews down to México and they (as well as us) count other species as well – ducks, other geese, and so forth. Then, this last year, we flew a pioneer survey, with a fixed wing airplane, up in Nunavut which they have been ...

RK – Now, that's in Canada?

BC – In Canada, central Canadian arctic, Victoria Island specifically, is where we went last year. For a number of years, Ray Alisauskas, with the Canadian Wildlife Service, has been

doing surveys up there with helicopters. Because of the increased cost of helicopters, Tim Moser with the Migratory Bird Program in Denver asked Russ Oates, my boss here in Anchorage, whether he would be willing to try to do something with a fixed wing airplane. So, Russ asked me if I could try it. I said, yeah, I'd give it a try. So, last year was the first time we went up there and flew it. Fred Roetker, who is stationed in Louisiana with the Flyway Biologist program, went with me. As it turns out ... I didn't want to do it in any other airplane but the turbine Beaver, but as it turns out, when we arrived there, we found out there were only four drums of av gas there. They get their fuel once a year, down the Mackenzie River and across, when the ice is out in August, so ... we couldn't have gotten anymore av gas for a while. But, you could pull up to the pump and get turbine fuel all day long. So, that was a factor and then, of course, the increased safety of the turbine engine, going into unfamiliar territory. Doing that survey is a good example of starting slowly. Even though I have experience in Alaska, it was a different place. I was fairly cautious about the weather and so forth. But it's a really interesting place. For instance, there's a lot of musk ox up there and it's treeless. There is a lot of ice, because it's just starting to turn into spring and melt out in late June. So when you are coming over rock outcrops, looking down on this scene with musk ox and ice, it was kind of like looking at the Ice Age – like you were going back in time.

RK – Oh, neat.

BC – And we (Debbie Groves and I) have plans to go back again this year.

RK – All right. Well, not related to flying, but I do want to ask you about ANLCA. You were in Alaska during the contentious ANLCA period – arguments over the Alaska Lands Act. What involvement did you have, and what memories do you have of that conflict?

BC – Well, I don't have a lot of memories of it. Oh, you know, what I read in the newspapers and heard other places, about the conflict. I think one important factor to keep in mind is Jim King's and Cal Lensink's contribution to establishing a lot of the new National Wildlife Refuges. A lot of the information used for justifying the new refuges (that are primarily waterfowl refuges) came directly from this spring survey that we're doing right now. So, there's been a tremendous benefit gained from this long term data set on waterfowl populations. Of course, the Rampart Dam controversy, before ANLCA, on the Yukon Flats, put a lot of focus on the importance of northern areas to waterfowl. But, one interesting thing to me was that after the new refuges came along, some brand "new" shiny Refuge Managers showed up in Alaska. This was after Dave Spencer was ... let's say encouraged to retire. The people running the refuge operation at the time were ... didn't have near ... didn't have anywhere near the experience that Dave had with Alaska in general – and with Alaska refuges specifically. So, that was unfortunate. It was also interesting because, on this spring survey, we stop at a lot of the refuge locations in Alaska. It might not have been the first year, but by the second year (after establishment of the

“new” refuges) coming around, the “new” refuge managers made it known that they wanted to see Jim and I when we came through. I remember we took along the “new” refuge manager on the Innoko NWR, Phil Pheger at McGrath, to “his” refuge. It was the first time he’d been to the refuge, and he was the Refuge Manager for a year there – and hadn’t even been on “his” refuge! Others, I remember, they didn’t say it per se, but I think what came through to me was that they were not getting much direction out of the Regional Office on what they should be doing out there. What’s important? What’s happening in Alaska? What are the issues? They knew what they’d read and what encouragement they got from the Regional Office, but from my perspective, it was ‘well, make sure you get this report done on time, get this paperwork done, so forth and so on.’ The thought occurred to me that if Dave Spencer had been there, he would have set quite a different tone about how to get started. I think my feeling is that, eventually, they all figured it out on their own, or from talking with other people. Jim, of course, had a lot to say about it, because of his vast and long-term experience in Alaska. Anyway, that’s my perspective on that. I also regret a missed opportunity. I went to one of those Project Leader meetings in those days when all the Refuge Managers, “new and old” were called in. I was also required to attend at that time. They went through a lot of hashing over of the budgets and stuff, but, the thought occurred to me ‘well, you should take a picture of all the “new” Refuge Managers, because you’ve got them all here together and some time it’ll be important.’ But I didn’t mention it and I don’t think it was ever done (I don’t know for sure). It would have been nice to have had a group picture of all these “new” first managers of the new refuges.

RK – Well, Bruce, we’ve talked about your flying and your career, but one thing we haven’t covered is your family. I know you have a life outside the Service and it ... you’ve talked about ‘duck widows.’ Tell me what a ‘duck widow’ is.

BC – Well, first – I did get married in Juneau. I met my wife, in a dentist chair actually, in Juneau. She was a dental hygienist there at the time. We got married in Juneau and then, shortly thereafter

RK – And what year was this?

BC – This would have been 1975, September 6th. I get reminded that I’m usually gone away from home when our anniversary comes around – like last year. But, anyway, soon after we were married, off we went to this Flyway Biologist Program down south in Laurel, Maryland, and then Lafayette, Louisiana, and then back to Alaska. In Lafayette, I met a gentleman named Johnny Lynch, who was (and is) a legend in waterfowl circles. He was with Dave Spencer in the 40’s there in the prairies, laying out the Continental Survey Program with airplanes. He’s written a lot of really interesting stuff, one of which was read at this “retiree thing” at NCTC just recently – two/four weeks ago. But, anyway, I made a trip or two with him there in Louisiana, looking at geese. He developed a system to age

geese from the ground with binoculars, by watching them coming in to land and feed in rice fields. Johnny was just a wealth of information! If a person could just soak up a tenth of what his brain used to have in it ... he's since passed on. But, one thing he used to talk about was 'duck widows.' And what he meant was 'you guys ...' and, of course, this was a different time, but ... the guys would go off to Canada and have fun all summer learning how to count ducks and, of course, living it up in the refreshment institutions. The wives were left at home, "holding down the fort," raising the kids. He called them 'duck widows.' He made a really good point, that, you know, that's a part of the Service that needs to be recognized. When I came to work for Jim, I mentioned this "duck widow" story and Jim said 'oh, we've got to do something with this.' So, we made up some little "duck widow" certificates. We had a little party at his house and presented them to my wife, Sue, and to Jim's wife, Mary Lou, who, over more years than mine and Sue's, had been "minding the store" at home. Well, it's a different time now. We now have some women FWS pilots and so it's not just women spouses at home, there are men spouses now, too. But, somebody has to ... if you have a family and are raising kids, somebody needs to be around to help raise kids. So, like Jim has pointed out, you need to be at a certain "comfort level" when you take off to go do this concentrated flying work. We have to concentrate on the flying and the biology and getting the whole thing done in a relatively short time period. You cannot be having a lot of concern about how things are back home; is the family safe, are they getting along okay. That was a big factor in Jim's thinking, and mine too, about not moving out of Juneau, because that was a place where, we felt, our families were comfortable and could get along well without us for a period of time. I think that's probably true in other parts of the Service, not just the Waterfowl Survey Program, but we were gone for, probably, longer periods of time. That's something I wanted to bring out.

RK – Well, how about catching Trumpeters and the birth of your first daughter?

BC – Ah, well, that was another story about having an understanding spouse because our first daughter was scheduled to arrive in ... oh, late ... mid to late August in 1978. So, we had been taking birthing classes, where I was planning to be the coach and ...

RK – Oh, yeah.

BC – ... how to do a natural childbirth.

RK – Oh, really?

BC – Bill Sladen, who is another character that Jim knows really well and I got to know, was involved. He was a medical doctor at Johns Hopkins University, with a strong interest in particularly swans, and did some work with Jim, early on, in Alaska. He came from England and has an English accent. He had arranged to provide some swans for the Moscow Zoo. So, we borrowed the standard Beaver – piston Beaver (N728) that I first flew in Juneau, which was still there at the time, and went off to Cordova to catch these

Trumpeter swans. I went because our baby was not due for a couple of weeks. I had never caught swans, but Jim knew how to do it. We went up the Copper River to Peninsula Lake, near the confluence with the Bremner River, and ... caught some swans, and got the airplane stuck. I learned about how to “un-stick” a Beaver, which was no big ...

RK – Was it in water that you got it stuck?

BC – In shallow water, on a little sandbar. Not a big problem for Jim. One thing that float plane pilots should know how to do is how to “un-stick” airplanes. Just because you get an airplane stuck doesn’t mean that you’ve got to call in a helicopter. It’s another example of why making the flight plan maybe a little longer than just exactly when you expect to get back is useful. Anyway, we got the airplane “un-stuck”, got these swans back to Cordova and spent the night. We were going to take them back to Juneau the next day, to ship to Moscow. We were sleeping in the Forest Service bunkhouse. Early the next morning, I don’t know, five or so, Garvin Bucarria, who is another interesting character who worked for the Forest Service, whispered in my ear ‘your wife is going to have a baby today in Juneau’. Slowly ... I’m beginning to hear and comprehend that, ‘oh, my wife is having a baby. Uh oh, I’m supposed to be there.’ This story was told at Jack’s retirement party (his version) and my wife’s version. But, anyway, I needed to get to Juneau. So, I called up Alaska Airlines, which was the only airline flying out of Cordova. They tell me ‘well, yeah, we’ve got one flight to Juneau today, but it’s full’. And there was no chance of getting on – there’s a long waiting list. So, the only option is to fly the Beaver down to Juneau. So, we load the swans into the Beaver – four of them in the back – and Jim and I and Bill Sladen, take off and head down the coast. It’s good flying weather as far as Yakutat, but the forecast was kind of “iffy” going into Juneau. After we refueled at Yakutat, we checked on the weather again at the Flight Service Station there. The weather looked pretty crummy, the rest of the way, on the outside coast. Now, there are two ways you can fly to Juneau from Yakutat, in a small plane, when the weather is down. One is what we called the “back door way” which was up the Alsek River, over the hills, through the passes, down to Haines and then down the coast to Juneau. So, it looked like the coast route, down around Cape Spencer, was going to be socked in. It’s just typically poor flying weather along there and if it’s bad – it’s really bad at Cape Spencer. Jim was flying, because I had other things on my mind. So, we headed off up the Alsek River, going to Juneau with the swans and Bill Sladen. I remember that we were flying along, up the river, just getting into northern British Columbia. At that time, there were no swan records for that part of the world. Bill Sladen, in the back, always the biologist, was looking with his binoculars and he’s aware of our trying to get to Juneau because my daughter ... well, we didn’t know it was a daughter then ... was being born. So, he spots some swans down below and he says in his English accent ‘I don’t suppose that we could pop down there for a closer view of those swans?’ Jim was flying and I’m sitting in the right front seat. We both just made like we didn’t hear what he had said. Jim just kept on flying. We got over the pass to Haines just fine. Coming down Lynn Canal, the ceiling’s getting lower and lower and lower and lower. Pretty soon, it’s fog right on the

water. It's calm, because it's foggy. So, Jim lands. We taxied through the fog, down Lynn Canal. Just a little ways down is Berner's Bay, which is at the north end of the road system in Juneau. We had an HF (high frequency) radio, which we still have in the airplane. So, we called and eventually passed a message to Mary Lou King. I guess it turned out that Jack Hodges was at Mary Lou's. We said that we were going to taxi up on the beach at the end of the road, at Echo Cove, in Berner's Bay and could you come out and get us. So, Jack drove Jim's VW bus out to the end of the road. We put the wheels down, pull up on the beach, park the airplane, take the swans out, put them in the back of the VW bus and all of us go roaring off to the hospital. And from my perspective, I arrived at just the right time, because my daughter had been born three hours previous ...

RK – Oh.

BC – ... and she was just waking up from her first nap. And so, 'ta da, here I am.'

RK – Oh, really?

BC – But from my wife's perspective, 'you missed the big event - you missed helping me have this baby.' But, a woman friend (Cheri Jensen), who we knew at the time there in Juneau, helped. She's since moved down south. But, she used to like to tell folks 'well, I'm actually the father of the baby,' because she was there coaching my wife having our baby. Anyway, the end of the story is, our daughter's name is Tamara Lynn Conant. And the Lynn comes from Lynn Canal, which was where we were when she was actually born.

RK – Oh, great story. Yeah. Well, gee, Bruce, how about ... those are the questions I had. And I thought we'd conclude by ... I'd like to ask you ... that, looking back, what would you like to say about your long career with Fish and Wildlife Service?

BC – I guess I would say that I've been very fortunate ... for a person like me to have ended up in a place like Alaska, doing the kind of work I've been able to do the last few years. And ... I suppose, like a lot of things, it's not something that was planned to happen that way. It just sort of happened that way by a series of circumstances. Like I often think back – well, what if I would have taken the job driving a dump truck – how different my life would have been. And, if I hadn't gone to Juneau and met Jim King and got interested in waterfowl work. I think of what Jim said at Jack's retirement ... somebody asked him about his work in the Fish and Wildlife Service, because he still worked as a rehired annuitant. Jim said 'well, I worked construction' or something 'one summer and then discovered the National Park Service. I worked one summer there and I really haven't "worked" since then. I've had this wonderful career.' That is sort of how I feel – that it's been a privilege to be able to work in Alaska and get to know the people I've gotten to know. And certainly, from a flying perspective, for me personally, flying the turbine Beaver (N754) has been the ultimate experience for me ... flying the kind of flying I like to do in a

superlative airplane. So, yeah, and being involved in the Continental Survey Program, and then being fortunate to have Jack and Debbie join the Project and ...

RK – Jack Hodges.

BC – Jack Hodges and Debbie Groves. Jack brought us into the computer age. And also being part of a program that's being used across the whole continent now and other parts of the world even. Jack and I were instrumental in it– Jack certainly the biggest part of it, but I like to think that I contributed some, in that, he would come up with computer programs and I, being a computer illiterate – barely literate now – would take them and go try to do something that he designed to do, and then pretty soon I'd get the computer confused and locked up. I told him 'Jack, you've got to program it so I can't do that.' Like, for instance, we used to have a procedure where you could save the data, but if you push the wrong button it would just delete everything you'd just collected. So, I said, 'no, you've got to have it so if you push it once it says do you really want to do that?' So, we've got those kinds of things in the computer programs. 'Do you really want all that data to go away?' 'No, I don't want that to happen.' Anyway, that's part of that whole thing. And Jerry Lawhorn was the same way with the airplane. That's partly why the turbine Beaver is such a joy to fly. It is designed to be simple, easy and straightforward to operate. Like Jerry Lawhorn was fond of saying, 'well, I designed it to be "biologist-proof so a person that's doing other things than just the piloting can do their work... make it simple, so it's harder to make mistakes.' Really what he was saying was, make it people-proof, because pilots make mistakes just being pilots. Let's make it the most simple, straightforward and easy to operate airplane possible. Once, Jim King was there, Jerry was telling us this in front of a crowd and he hesitated when he was going to say "biologist-proof." Jim says 'go ahead, say it. It doesn't bother me. Now, if you said you wanted to make it "fool-proof" – that would bother me'. Anyway, I've had a wonderful career and it's not an easy decision to retire, but, at some point, a younger generation comes along and they need to step up, be part of it, and hopefully have as wonderful of a career as I've had. Hopefully that's going to happen. It looks positive, for the future, to me. And I think it's worth trying to help OAS, which is now AMD, I guess, learn more about what we do and how we do it and why we do it. So that they can, maybe, learn better how to help us do it.

RK – Well, gee, thanks Bruce. You know, in the 27 years I've been with the Fish and Wildlife Service, you've come by every year with the birds, and you've really become both an institution and legend. And a lot of us, who've gotten to know you over these decades, are going to miss you not coming by. Thanks for the interview and for all you've done.

BC – Well, you'll have to come by Juneau sometime for a visit.

RK – Okay.

BC – Thanks, Roger.