**Dr. Colin Bull**
**20 August 2000**

**Brian Shoemaker**
**Interviewer**

(Begin Tape 1 - Side A)

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BS: *This is an oral interview with Dr. Colin Bull, conducted at his home on Bainbridge Island, Washington, on 20 August 2000 by Brian Shoemaker. The interview is part of the Polar Oral History Project sponsored by the American Polar Society and the Archival Program of the Byrd Polar Research Center on a grant from the National Science Foundation.*

*Colin, you've got a tremendously long history of involvement in the Polar Regions. We'd like to get that on tape for posterity. This is your interview, and you conduct it the way you want.*

CB: Good. Do I need to be here or closer to the microphone?

BS: *That's fine. We'll play a while and see how it works, but you should be good. You've got a good voice. Let me ask a question for starters. Where'd you go to school and how did you get interested in science?*

CB: Now, before we go that route, I do need to tell you a cautionary tale. When we came back from Greenland from 1952-54, I inherited a room in Downing Place, Cambridge University that had previously been occupied by Frank Debenham. You know who Frank was, I guess. He was the physiographer on Scott's Last Expedition and he became the first Director of the Scott Polar Research Institute. This used to be Frank's room. OK. I was sitting in that room for several

months, reducing the gravity data that we got from Greenland. In the other half of the room was Stan Paterson. Stan was my surveyor, crossing Greenland, for the second year of it, and Stan was there, happily reducing the survey data. And there's not too much that's more boring in the whole of life than two guys sitting in one room reducing data. OK. And one day, Stan said to me, or I said to him, "Wonder what's in that back cupboard there?" So, we went to the janitor's cupboard in the back corner of the room. We jimmied the lock open and that wasn't at all difficult. And in the room, in the little cupboard, we found the usual pots and pans and brushes and so on and so forth. And also, right at the back, tucked down, there were 14 pictures. I think it was 14. . .it might have been 10. All right. Half of them were Ponting's photographs, one of them being that thing up there. **[Ponting was the photographer on Scott's Last Expedition.]** And not that one - that's a copy of it. And the other half were Wilson's oil paintings. **[Wilson was zoologist and artist on the same expedition.]** And I looked . . . all of them, you know, of completely immeasurable value. And I looked at Stan and Stan looked at me, and we both realized that the only two people in the whole world who knew that these things were there were Stan and Colin. Well, I looked at Stan and he shook his head and I shook my head. So we went outside and we got a wheelbarrow. The builders were eating. And we put the paintings and the photographs in the wheelbarrow and trundled them around to the Scott Polar. We gave them to them and they were very pleased and we told them all about it, and so on. They're still there. A very nice story.

The only trouble is that Stan came and house-sat for us while we went to Mexico last January. I told this story to Stan and he said, "I don't remember any of that." That's my cautionary tale. You don't believe anybody. I think I'm telling the truth. Stan is convinced it never happened. I can only speak of one way out of the dilemma. It wasn't Stan. It was Hal. Hal was another member of our Greenland Expedition and he was upstairs and it's just possible that for Stan I should substitute Hal. But I've never checked that with Hal. Anyway, don't believe a thing that you hear!

OK. I was born in Birmingham, England - central England - and rather soon we moved to Herefordshire, which is one of the most rural and backward bits of Britain . . . bits of England.

And I went to Lucton School at the age of 10. This was a very poor public school. Public in British sense, not American. OK. And the only thing of significance there was that in Form 1in my first year there, we read a book. It was called, "South with Scott," by Evans, Scott's second in command. And we read that book and I was struck with it in several different ways. Shortly after that, I read another book from our little school library, which was a very inferior library, called, "Mid-Ice" by Georgi, which was an account of the Wegener Greenland Expedition. I read "Mid-Ice" and in "Mid-Ice" is an account of the central station in Greenland, called Eismitte - Mid-Ice where there were, over the winter of - what was it, 1930-31? - three people: Fritz Loewe, Georgi and Sorge. And I was much struck with this. And as a result of reading those two books, I decided at age 10, this is, that I wished to become a polar hero. No . . . that I was going to work on science in polar areas. **[So, as you see, I'd generated two heroes, whom I've managed to retain as heroes, despite discovering their warts. One was Shackleton, and the other was Loewe. Nowadays young people don't have heroes, except transitory athletes. A pity.]**

BS: *How old were you?*

CB: Ten.

BS: *This expedition that was on Mid-Ice, which . . . German expedition?*

CB: Yes. Wegener's expedition, often called the Mid-Ice Expedition. All right. There's a . . . I need to tell you another little story about this. I followed Loewe's progress - not continuously and 25 years later, when Loewe retired from Melbourne University, I invited him to come to The Ohio State University and Fritz Loewe and I went on an expedition. We crossed the Sukkertoppen Ice Cap, Southwest Greenland. And I would point out that it's very seldom that one has a chance to meet one's hero and Loewe was certainly my hero for what he did at Mid-Ice. And I've never met a case before where a person has had an opportunity to go on an

expedition with one's hero. All right. Loewe was Jewish. And at that time, 1930-31, was the rise of Hitler. And Loewe didn't like the idea of this rise of Hitler, being Jewish, and denounced much of . . . or denied much of what Sorge and Georgi were saying. Made some very strong Semitic comments rather than anti-Semitic comments. And as a result of this, when the expedition returned to Germany, those two, or one of them in particular, denounced Loewe for his anti-Hitler talk while they were sitting in a tent in the middle of Greenland over the winter. And he was imprisoned. Can you imagine that? Can you just think of this - you know, three guys talking about everything because there was nothing else to do. And he was denounced. All right, eventually he, Loewe - no, Hindenberg died. Hindenberg was the Chancellor, Hitler was the Vice-Chancellor. And to celebrate the death of Hindenberg, Hitler declared a one-day amnesty for all political prisoners and Loewe picked up his wife and baby daughter and went to Holland on the one day that he had a chance to do so.

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And from there, he went to Britain to the Scott Polar, worked there for three years from 1934-37, and then went to Melbourne and eventually became effectively the professor of meteorology at Melbourne.

BS: *How do you spell Loewe?*

CB: L-o-e-w-e. First name, Fritz. OK. Loewe went on a French expedition to Antarctica in the early 1950s and as I say, when he retired, which was 1961, I guess, I invited him to come to The Ohio State University, which he did, summers only. And he lived in our house and we went, in 1962, on this silly little expedition crossing the Sukkertoppen Ice Cap where I was trying to find the thickness of the ice. And Loewe told us an awful lot more about the Mid-Ice Expedition. Anyway, I get way ahead of myself.

BS: *You can.*

CB: OK. That's it from when I was from 10 until 1962 when I was, I guess, 34. OK. And from Lucton School, from which I, in American parlance, graduated in 1945 - the last year of the War - I went to Birmingham University. Birmingham because that was the only place I could get in. This was the year of the returning servicemen and 90% of the university places were reserved for servicemen. So I went to Birmingham University and read, British parlance again, I read physics. I did a first degree in physics and then by gorgeous happenstance, my military service was working in the luminescence laboratory at the University of Birmingham and I had to do that for two years. It was work of national importance. And the University, in its wisdom said, "Well, if you add one year to that, we'll call it your residence qualification for a Ph.D." So I did my Ph.D. at Birmingham in condensed matter physics, luminescence of solids and had the wonderful opportunity to continue in that progress, in that career, but the down-side of it was that I had sat for three years in a darkroom and this didn't appeal an awful lot. So I looked for some alternative employment.

BS: *What date?*

CB: I finished my Ph.D. in 1948, when I was . . . no. I finished my Bachelor's degree in 1948 and my Ph.D. in '51 when I was 23. And then I went to Cambridge University where I was working on the origin of the Earth's magnetic field, which is a solid state physics problem. But before I had gone to Cambridge, I went on my first polar expedition. We went to Spitsbergen, 1951 - yes, summer of 1951. At Birmingham University, we were very lucky in having as our Vice-Chancellor, that is, President, a chap by the name of Raymond Priestley, who had been the geologist on Shackleton's first expedition and Scott's second expedition. So, we - 10 students - well . . . one was a junior faculty member - 10 students went along and said to Raymond

Priestley, "Would you be our patron if we go on an expedition to Spitsbergen?" And how could he say no? And he was very, very good as a patron. He interfered not at all. Gave us one or two worthwhile bits of advice and talked to us.

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And we managed to develop a relationship with the president of our university - our university president, which again is most unusual for students. And Raymond Priestley gave us a couple of talks with a moderate amount of beer. He talked about life on the northern party of Scott's Expedition and in particular the winter in the ice cave at Inaccessible Island. And I chided him then, even then, and I was just, as I say, a student then, chided him with the thing that they had done in the cave at Inaccessible Island of drawing a line down the middle and the officers, or "honorary" officers **[they made Priestley an "honorary" R.N. officer]** on the one side and the petty officers on the other. And the rule was that anything said on the one side of the line could not be heard on the other side. So that people could speak their minds freely and not be too worried about the effect of it - of this speech of officers and vice versa. And Raymond Priestley gave a good rational explanation of the advantages of this system. And you have to remember the time and the state of affairs in the British Navy and I imagine in every other Navy, and so on.

The other talk that he gave and I wish to goodness I'd had a tape recorder then, was a comparison of the leadership qualities of Shackleton and Scott. That would have been most, most interesting to have right now. But I didn't.

**[Added October 2001. Well, here we go again. Last month, September 2001, we had a mini-reunion of our Birmingham University Spitsbergen Expedition. I mentioned to my old friend, David Gossage, these two talks from Raymond Priestley - and he couldn't remember either. Well, I heard him talk about Scott and Shackleton on another occasion, with the British Association, and his account of life in the cave is in his *Antarctic Adventure*, but I was certain that we'd had our own little talks directly from the V-C.]**

All right. So we went off to Spitsbergen and did a nice bit of work for a limited time. We took our own vessel. It was a small motor launch from World War II - a Fairmile motor launch type D, with a hard chine and these things were used for chasing U-boats around the North Sea. All right. And by the time that we acquired it, it had been modified and had three diesel engines rather than one great big aero-engine. And so we pottered across the North Sea at 8 knots, best, and got as far north as Tromso. And in Tromso, the "Skipskontral" came on board and looked around.

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We launched the lifeboat and it sank. And he pinned a notice on the mast saying, "This vessel is unfit to proceed in any direction," and he denied us permission to go to Spitsbergen. But, we managed to get there alternatively on a mail boat and came back on a coal boat.

BS: *On a what? Coal boat?*

CB: On a coal boat. A Norwegian coal boat. And then the governor of Spitsbergen, whose name was Helge Ingstad, loaned us his motor launch, the *Sysla,* and we went around to our research area and did a nice piece of work, I thought.

BS: *Where was the research area?*

CB: It was inland from Prince Charles Foreland - it was called, good Lord, the name of the valley or the fjord escapes me.

BS: I'll just put Prince Charles.

CB: It was St. John's Fiord, inland from Prince Charles Foreland. And as I said, there were 10 of us. We split into two parties. There was a coastal party doing . . . well, we were all doing geology at this stage because we had to limit our objectives. I gave up my objective, which was to do magnetic recording, nominally in preparation for the IGY. They were going to have an IGY station somewhere in that area and I'd taken along a LaCour recorder but never used it.

All right. And we came back from Spitsbergen. I went to Cambridge University in the Geophysics Department and rather shortly after that, round about Christmas, 1951, I'd had enough time in the laboratory to understand the limitations of the place. This is Cambridge University, mind - the facilities were dismal. Absolutely dismal. So I went along to the head of the department, my old friend Ben Browne, and said, "You know, I haven't been able to do this because of that, and so on and so forth." And in the usual way of senior people he tried to placate me and said, you know, "After Christmas, it will all be better. It will all be much better and we'll have some money," and so on and so forth. And when he thought he had placated me, he said, "By the way, have you ever heard of Commander C. J. W. Simpson?" and I said, "No." He said, "Because he's taking an expedition to Greenland and I thought that some of your Spitsbergen friends might like to volunteer for it." So I volunteered on the spot. And that was Christmas, 1951. And we went through some machinations. I never filled out an application form. I never did. But, I was duly interviewed. The interview committee comprised Lancelot Fleming, who was then Bishop of Windsor, I guess he was then. Lancelot Fleming has the unique set of credentials that he was employed by the British Graham Land Expedition (1934-37) as geologist and chaplain. Anyway, Lancelot Fleming effectively was the selection committee for our British North Greenland Expedition. And before I knew it, I had volunteered, been accepted and was in Greenland before I could think about the stupidity or otherwise of such a venture.

All right. We went to Greenland. I had worked out a nice little scientific program, I thought, where I was going to be part of a party making a traverse from the east coast to the west coast measuring ice thickness by two methods.

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One was a seismic method and the other was measuring gravity and elevation. So, I spent most of the next two years, 1952-54, surveying across Greenland. OK. And it was a highly interesting thing, in retrospect. At the time, what it amounted to is that we looked through a theodolite at the inverted bloodshot eye of another fellow two miles away, looking through his theodolite at our inverted bloodshot eye and we surveyed our way across by a method of . . .a surveying method that we had invented which was quite good. It was quite good and there were four of us.

BS: *What did you measure when you surveyed into one another's eyes?*

CB: What we were doing, we formed a triangulation system across Greenland. We had two pairs of people. One was an observer, one was a recorder. Pair No. 1 had a theodolite. Pair No. 2 had a theodolite and a second tripod over here 100 meters north or south on which we put a sub-tense bar - a 2 meter sub-tense bar. This is an old fashioned method of surveying and I guess you've never heard of it.

BS: *No. But I was a surveyor.*

CB: So, Pair B measured the angles between the ends of a sub-tense bar so they could determine the distance from the subsidiary tripod to their own theodolite. All right, Pair A measured the horizontal angle between their two tripods and measured the vertical angles. We did reciprocal vertical angles to get rid of refraction effects. So that our survey method, you know, for four very inexperienced surveyors, was pretty good. And we went from sea level one side of Greenland to sea level the other side of Greenland. And we finished up with a closure error of the order of 8 meters.

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BS: *That's pretty good.*

CB: And the, you know . . . that was in about 400 stations going across Greenland.

BS: *That was the slowest crossing of Greenland?*

CB: This is the world's slowest crossing of Greenland and it's held by three of us because the surveyor changed after the first year.

BS: *Who were they?*

CB: All right. Number One, the leader of the party, was Mike Banks - Captain Mike Banks, Royal Marines and he has written all of this up in a very nice book called, *High Arctic*. Number Two was Taffy. Taffy was a staff sergeant in REME - Royal Electrical and Mechanical Engineers. He was, obviously, in charge of the vehicles. I was the scientist in the party and in the first year, Malcolm, and in the second year, Stan, helped with surveying. Well, we were all doing the surveying, but Stan was supposed to be in charge of the surveying.

BS: *What's Taffy's first name?*

CB: Taffy Oakley. His proper name is Jack, but he was a Welshman and so on, and as I say, he was a staff sergeant in REME, and a fine person. I liked Taffy immensely and continue to like him. And during our crossing of Greenland, I said to Taffy many times, you know, "Why the hell don't you become an officer?" And he said, absolutely typical of the British Army at that time and probably still, he said, "I've got the wrong accent." He had joined the Army as a boy. That

was his education. He joined the Army as a boy at 14 or whatever it was and obviously highly competent, but spoke peculiarly, you know, his voice went up and down, and he said, "I could never become an officer." Why, it so happens that the other staff sergeant - a fellow by the name of Roy Homard - after one year in Greenland, went on Bunny Fuchs' Transantarctic Expedition and later did become an officer.

BS: *What's his name?*

CB: Roy Homard. H-o-m-a-r-d.

BS: *Was he at B.A.S.* ***(British Antarctic Survey)****?*

CB: Sorry?

BS: *He was at B.A.S. for a while?*

CB: No, he was never with B.A.S., but he was on Bunny Fuchs' Transantarctic Expedition.

BS: *I met him somewhere. Maybe it was the Antarctic Club.*

CB: Someplace like that, probably. Anyway, so we came back from Greenland in 1954. We had . . . the three of us had done the slowest crossing of Greenland. And we'd gotten instructions from our committee that when we got to Thule - we never got to Thule, but close, to Nuna, on the coast, 20 miles away with the vehicles - but, we should sell, and I quote, "to the best advantage of the expedition" any remaining vehicles. Well, we started our crossing with four vehicles and when we got to Nuna, we had one left that was completely shot. As I remember it,

the tracks were held on with bits of string and so on and so forth. All right, then as we drove into Nuna Base - Nuna was a little bit north of Thule -

BS: *N-u-n-a?*

CB: N-u-n-a. Nuna Take-off, it was called. It was the easier access onto the Ice Sheet.

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We saw about 25 Weasels, brand new, all lined up. And we wondered how the hell we could sell "to the best advantage of the expedition" our completely shot Weasel - the one remaining of our crossing party. And the leader of the Base, I can't recall his name, said, "Look boys, I'll tell you what I'll do. I'll give you it's weight in beer." So, during our stay in Nuna, we gave him the vehicle and we tried to consume its weight in beer. Well it was fun. Then we got flown over to Thule and our cheapskate expedition committee said, "You will proceed from Thule on the Greenland Coastal Steamer, over to Copenhagen and then back to London, which would have been a marvelous trip except that we'd been away for 26 months and had no wish to be away for another two months. So, I gave a lecture on the science of our crossing and Mike gave a lecture to the assembled officers of whichever squadron it was, and they said, "Why are you hanging around here?" We said, "Because we've got no other method of getting home. We have to wait for the Steamer." And rather quickly, we were stuffed onto a C-54 that had come up to Thule to bring a whole bunch of high-ranking officers who wanted to go fishing. And we got taken to Goose or Gander, in Labrador, and then flew back across the Atlantic and that was the end of our expedition.

Except that when we got back home, we found ourselves highly in debt. And it became our responsibility to pay off the debt. All right. I gave something exceeding 100, but probably not exceeding 200 lectures in the following year at whatever rate I could manage to hustle up,

because I had no organizer at all. It was all on my own back. And I lectured all the way around the country on the British North Greenland Expedition. I also agreed to edit a science book on the expedition, which eventually became, *Venture to the Arctic*, and was published by Penguin, which was good fun. And our arrangement with the expedition was that 90% of the proceeds would go to the expedition and we could have the whole 10% to ourselves. For that book, we split up the proceeds. I got the major share. I got $72 for my work - 18 months work - in editing the book. Well that was OK. And we eventually paid off, I think, most of our debt. Simpson, the leader, with help from a lot of the rest of us, wrote a book that was a very good book called, *North Ice*, and Mike Banks wrote, I think an even better book called, *High Arctic*. I wrote the *Venture to the Arctic*, and that was about it.

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And I then sat down, first of all at Cambridge University, then I was offered a temporary place at Birmingham University and sat down and worked up the results as best we could. And published some of them. And that took about two years. And in the middle of 1956, oh . . . my job at Birmingham expired, I think it was June or July of '56. So I had been looking for other jobs. And I was offered two "plums." One was at Imperial College, London, which certainly would have been by far the best thing academically for me to have done. And you know the guy who took it finished up with a knighthood, I believe, and so on and so forth. And the other job that I was offered was in New Zealand as a Lecturer in physics and I subsequently parlayed that into a Senior Lectureship in physics at Victoria University in Wellington.

Well, we got married in June, 1956.

BS: *Who's the "we?"*

CB: "We" is me and Gillian. All right. Gillian is the sister of one of the members of our Spitsbergen Expedition. We had the Spitsbergen Expedition reunion in Christmas, 1954. And I was, by that stage, the only unattached member of the 10 of us, and Gill was the sister of our host, who was the senior geologist of the Spitsbergen Expedition. And that was it; . . . so we got married, and obviously decided to go to New Zealand and to hell with this here academic advancement that would have come from the job in London, which would have been by far the better job, academically, and so on. So, we went off to New Zealand and New Zealand is clearly the best place to live that we've ever met. It just happens to be a terrible place to work, because in New Zealand in 1956, whatever you did, after you had been doing it for two weeks, that's a fortnight, by the time you've been doing it for two weeks, you were a national expert. Well, I started to set up some geophysics equipment and it was terrible. It really was absolutely terrible. I wanted some quartz fibre. There were no quartz fibres in the length and breadth of New Zealand, so I tried to make my own.

BS: *Quartz fibre?*

CB: Well, what you do is you start off with a little rod of quartz. You make a bow. You use that little piece of quartz as the arrow, but you heat up the quartz to near melting point. When it's all liquid, or mid-liquid, you shoot it across the room. You then spend the next several hours trying to find the blasted fibre. And you find it's not uniform and so on and so on. It was a terrible situation there. But, as I say, it was by far the best place to live that we've ever come across. So, we had . . . we . . . Gillian and I, had a little conference about this. What the hell are we going to do here, because I'm keen to be a scientist, but I'm obviously not going to make the grade in this direction because the facilities are completely inadequate.

I need to go back a little bit and say before we had left England, before I had left Cambridge, in 1956, when we were engaged but not yet married, Bunny Fuchs came along and invited me to be a member of his Transantarctic Expedition. And I asked him what he was doing

and we went through all of the plans and so on and so forth. And once again, I decided that this wasn't going to be a scientific expedition by any stretch of the imagination. If you're going to go and do science, you don't worry about the distance you cover as long as you manage to do the science. Bunny's objective was to cross the Antarctic. Not to do science. And I turned him down flat. In the end, the fellow that did take the geophysics job was a chap by the name of Pratt and his work is not really worthwhile. My old friend, Hal Lister, who had been with me at Northice in the middle of Greenland in 1953-54, went as the glaciologist and he did a moderately good piece of work. But, even he admits it would have been a heck of a sight better if he had gone there to do science rather than to travel.

So I was not sorry that I turned down Bunny.

BS: *Did they carry explosives?*

CB: Oh yes. And Pratt did seismic reflection work. He got some very peculiar results. I still can't explain them but I've given up trying. Anyway, so I didn't go with Bunny. We went to New Zealand instead. And after I had this inspection of the facilities of the science facilities in New Zealand that were highly lacking, I decided that I wasn't going to go that route at all.

(500)

And in that summer of 1957, I was invited to go on an expedition around the South Sea Islands measuring gravity, which would have been fine. But I decided I didn't want to go around the South Sea Islands measuring gravity. I'd rather go to the Antarctic. So we put together the first university expedition to the Antarctic - four of us. I was the leader. Peter Webb, who you know, was one of the geologists. Barrie McKelvey. Do you remember? Have you met Barrie?

BS: *I know the name. I don't know if I've met him or not. It's been thrown at me a couple of times.*

CB: Barrie is . . . I like Barrie immensely . . . he's now at Armidale, at the University of New South Wales, at Armidale. And our other man was Dick Barwick who is a biologist - a very good biologist, who is now working at Australian National University, Canberra. All right. If we go to the Antarctic, where are we going to go or what are we going to do there? I had seen with Bunny, when Bunny was talking with me, I'd seen photographs of the ice free areas of South Victoria Land and this looked intriguing and so on. Peter Webb and Barrie McKelvey and Dick Barwick and one or two others, had, the previous year, as part of the IGY summer support, been to the Antarctic, had had a very brief look at Victoria Valley which is one valley north of the area that I selected, and had done some preliminary work there.

BS: *Were they there with Americans?*

CB: No, they were there with other New Zealanders. But they had, as always, quite a lot of American support. In fact, they had American helicopters to get into the area.

BS: *That's what I meant. I knew they took the boat down.*

CB: Yes. Went on the *Endeavor*.

BS: *The Endeavor, yes.*

CB: On that wee, wooden warship. It was a terrible thing, as far as being sea-worthy was concerned. I think it was designed as a harbor buoy-inspecting vessel or something like that. And somebody gave it to the New Zealanders and the New Zealanders never saw the joke and used it.

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Anyway, we're going to go to Wright Valley - at that stage unnamed. Four of us were going to go and we worked out a plan for it and we needed money and support. The money was not difficult. I was the leader of the expedition and also the secretary because I'd been secretary of every other expedition that I'd been on as well. And I wrote large numbers of letters: "Dear Sir: I write on behalf of the Victoria University of Wellington Antarctica Expedition, 1958-59. This expedition will be leaving Wellington on such and such, and intends to conduct such and such work over the following so long. . . If you can find yourself in a position to support our expedition by providing the following materials free of charge, we can assure you that not only would you be aiding the cause of science, and so on and so on . . . " And we got a lot of support. A lot of support. Pounds and tons of Cadberry's chocolate, Anson boots galore, Horlick's tablets, everything. All we needed was an hour of helicopter time to get from Scott Base over into our area, which was readily forthcoming. And I can't remember the name of the pilot. Krebs. Krebs was . . .

BS: *The helo pilot?*

CB: VX6, the VX6 . . . was he? Yes. It was Krebs.

BS: *K-r-e-b-s?*

CB: K-r-e-b-s.

BS: I'll look it up.

CB: I'm not actually certain of that. But anyway, VX-6 pilots were very good. They took us over to Wright Valley and dropped us three little depots of food and kerosene.

BS: *Let me ask a question. Was it Blades? Dusty Blades?*

CB: Quite honestly, Brian, I can't recall.

BS: *He said he was the first to fly over there.*

CB: Maybe he was the year before when Barrie and Peter visited Victoria Valley.

BS: *He went down the first year. He's the one who took the tanker down. He rode the tanker down and then he became a member of VX-6 and did the first helo flying.*

CB: I could. No, no. There had been helo flying the year before I took our first party in.

BS: *OK. But he was there the second year, too.*

CB: It could have been. Quite honestly, I can't recall. And we did what I still consider to be one of the best bits of research in the area.

(600)

All right. We named the area Wright Valley after Sir Charles Wright who previously had qualified as Hero First Class in my book because of the work that he had done in Antarctica. He was the first glaciologist to write a book in English.

BS: *So you named it the Wright Valley.*

CB: I named it the Wright Valley.

BS: *He was on our National Committee by then.*

CB: Sure. Yeah. And when we were in Greenland, in 1953-54, over that winter, I was at Northice, which was the little base high, high up in Greenland - what was elevation? - about 8000 feet. And there were three of us there. And one of the books that we had was Wright and Priestley's, *Glaciology*. So, I became well aware of the work that he had done in the Antarctic and he was obviously a good guy. So we named the valley for him. It was a pretty obvious thing to do anyway, because the glacier at the end of the valley was called Wright Glacier. It's now called Wright Lower Glacier.

(End of Tape 1 - Side A)

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(Begin Tape 1 - Side B)

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BS: *OK. You went and named the Wright Dry Valley.*

CB: No I didn't. I named it Wright Valley.

BS: *Wright Valley, yeah.*

CB: And we did some good work. Dick Barwick did some good biology. We found 99 mummified seals, all of them crab-eaters except one. I did quite a lot of glacial history and the climatology. We did the first weather recordings there. Well, I'm just horrified to see the repeated statements in later years that it never rained in the dry valleys. It rained on us.

BS: *It rained at McMurdo.*

CB: Oh, now that's different. That's not in the ice-free valleys. And we had plenty of temperatures well above 50 degrees Fahrenheit. Plenty of high temperatures. Anyway, we did a nice little bit of exploratory work and Peter and Barrie, the two geologists, did some first-rate survey or reconnaissance geology work there. And the result of this work is that I now have what's called the "Railway Carriage Syndrome." I'll have to explain that to you. In Britain, at that time, there were many carriages on the railways, which did not have corridors. So that when you got into the carriage, the railway carriage, you stayed there until you got out of there. When you are the first person there, it belongs to you - the whole carriage belongs to you and you resent anybody else who comes in there. And this is called the "Railway Carriage Syndrome." All right. And I had this with Wright Valley. Because it's *MY* valley, you see. And when you think of the number of people who have worked in that valley since then, it's very considerable.

BS: *It's interesting because there are two groups: the scientists and the pilots, as far as the Americans go. And the pilots overflew a lot of places and saw them first. But they don't count as having discovered it as these guys that went on the ground who did it. Trigger Hawks photographed that in '46. I've got the photograph when he was doing the first trimetrigon from High Jump. And it's about where he turned back, but the Airdevron Ice Falls are beautifully displayed where he did . . .*

CB: Yes. Anyway, so we came back from that first expedition and it was quite obvious that we justified ourselves. And the result has been that there have been now, I don't know now, thirty-odd more expeditions from Victoria University of Wellington.

BS: *What's the Irish Sail? 99_____*

CB: Oh! The Weddell Seal.

BS: *How far up was the Weddell?*

CB: I, honestly Brian, I can't remember. I. . . no, I can't remember. But we had them everywhere. I was the only one of our party that went into the Labyrinth. I didn't find seals up there, but very close to the Labyrinth, in the North Fork, the North Fork of Wright Valley, what? - 50 odd miles inland? Something like that. And a hell of a long walk. And I did a gravity survey along the valley just to look at the tilt of the Trans-arctic block and so on. And it was all highly interesting.

All right. We came back to Wellington and when I got back, I discovered that there'd been another party in Wright Valley at the same time.

(50)

Bob Nichols from Tufts had also taken a party into the area. He had termed this area, Wright Valley, the "Grand Canyon of Antarctica," which obviously was a ponderous name that wasn't going to stick and it didn't. So we called it Wright Valley.

BS: *Is this the same Bob Nichols who was on Ronne's expedition?*

CB: Yeah. Bob Nichols was a great guy. He was a first-rate person.

BS: *He's sick.*

CB: Pardon?

BS: *He's sick. He's sick now. Right now.*

CB: Bob Nichols is dead, isn't he?

BS: *I just saw Bob Dawson, I thought he said he was sick. Maybe you're right.*

CB: Anyway. Bob Nichols and his students from Tufts named the glaciers at the end of that valley, Barkley, Meserve and two others, which escape me at the moment, were his students on that first expedition. And he didn't name any for himself. So, well, whatever. And when we came back from the Victoria University of Wellington Antarctic Expedition, we had lots and lots of clean up to do, like naming everything, justifying everything, and so on, which was a lot of fun. But a lot of work as well. And I carried on with my teaching at the university and then went up to Australian National University to measure the paleomagnetic properties of some of the rocks that I'd collected and it was fine. We did a good job of work there.

OK. The following year, I did not propose to go to the Antarctic for any length of time because we were expecting baby number two at Christmas and I did not wish to be in the Antarctic while my wife was giving birth to number two. So I went down to the Antarctic and organized where we were going to go and what we were going to do, and so on and I'd reckoned that we could usefully use five people on this second expedition. The leader was obvious. It was going to be Ron Balham who has very recently died. Ron Balham. Ron had been with the Transantarctic Expedition Summer Party two years before this. But he was going to be the

leader. Number Two was, who was it? Ralph Wheeler, I think. And then we picked two students and that left us with a fifth place. And we dithered about this fifth place and nobody volunteered. We weren't paying anybody, so it was a matter of being a volunteer. Well, all right. And eventually, number five came along, we thought. Impeccable credentials for that time. Had a Masters degree in geology, held the record for the fastest crossing of the Tararuas in North Island of New Zealand, and so on and so on. Just had the slight disadvantage that she happened to be female. And I thought about this, and I went along to the four members of the expedition who had already been selected and said, "How would you feel if the fifth member were a female?" And they said, "Uh-uh."

BS: *They were all Kiwis?*

CB: Yes. They were all from Victoria University. Then they said, "Who is it?" And I said "Dawn." "Oh, if it's Dawn, then that's just fine," because she was a brick. She was just absolutely first rate all the way around. We then went - we, because the professor of geology, Bob Clark, also was a great, great supporter of us and he came, too. We went to the wives of the two married members and they said, "Uh-uh." Then they said, "Who is it?" And I said, "Dawn," and they said, "Oh if it's Dawn, that's just fine."

(100)

And the advantage of New Zealand is that everybody knows everybody in the university and so on. And so Dawn was well known. So, as far as I was concerned, that was it. I then went along to the New Zealand Navy. I happened to live next door to the head man, Ted Thorne, his name was. He was the. . .I don't know what he was then. I guess he was a Commander. No, Captain. I don't know. And he said, "Sure we'll take her down." And I was a member of the Ross Dependency Research Committee, and we said, "Yes, let's take a woman." And the University was all favor of

being in the forefront of social evolution and so on. And they said, "Fine, yeah." And the only thing to stop us was that we needed one hour of helicopter time to get from Scott Base over to Victoria Valley and, come on, who was the head man?

BS: *Dufek?*

CB: No, no. Dufek's successor. The fellow who was at Ohio State two years ago, to whom you awarded an American Polar Society Medal.

BS: *Well, Tyree relieved Dufek in '59.*

CB: Maybe it was Tyree.

BS: *It had to be Tyree. He's been long dead. Long, long time. Who did we award the Polar Medal to?*

CB: I'm awfully glad you can't remember.

BS: *Well, he relieved Tyree. That was '62.*

CB: Yeah. OK. It was Tyree. Tyree refused us one hour of helicopter time to take our party from Scott Base over to Victoria Valley. What the hell he was afraid of, I don't know. So anyway, we argued long and strong. I went to see the US Ambassador to New Zealand. He refused to intervene. And so on and so on! In the end, Dawn said, "Look. Quit worrying." And I could see that if we had been any more aggressive, we would have lost support for the whole lot of us. So we picked another student. A chap by the name of Ian Willis and off they went. I was staying home. Off they went and they did a good piece of work.

BS: *Which year was this?*

CB: 1959-60.

BS: *Had to be Dufek.*

CB: No, it wasn't Dufek.

BS: *Then Tyree.*

CB: All right. It could have been Tyree. Could have been Tyree. Yes. Anyway, I asked Reedy, you know, what were the prerogatives of the Commander of Operation Deepfreeze. Could he have taken us? I asked him this two years ago in Columbus. And he said, "No. We were under orders not to take women." And I don't know where that order started from, but it seemed inane. And so on. He said, "We had no option."

BS: *Well, it was a Navy thing. You know, if you start doing that, then you had to allow them into the Navy. And so it was a bigger thing than Deepfreeze. Much bigger. And we just didn't do it. Although we took Bob Hope and all his girls out to the carriers and whatever.*

CB: Well, anyway, so for that second expedition, they took five people and it did not include Dawn. And Dawn got married to Allen Beck, who was New Zealand Geological Survey, Antarctica.

BS: *Her name is Dawn Beck now, huh?*

CB: It's Dawn Beck now. It used to be Dawn . . . Dawn Rodley. But she never made it to Antarctica. And the following year, I went on another expedition along the Kotlitz Dry Valley area. How many were there of us?

(150)

I think there were five on that expedition, but I did not go as leader because the leader's main job follows the expedition, after the expedition is all over and I wasn't going to be there because I was going to come to the Ohio State University in 1961.

BS: *How did that all transpire?*

CB: How did it transpire? We had, Gillian and I had gone to Canberra for a mini-sabbatical. I was going to go and measure the paleomagnetic properties of rocks, again - of the rocks that Ian Willis had collected on that expedition. And while we were in Canberra, I received four offers of jobs. Never happened before, never happened again. All in one week. I was offered a job with the fellow who had been my Ph.D. advisor. He said, "I've got a senior lectureship if you want it here," in Britain, in Hull. I was offered a job in London, with the Central Electricity Generating Board. So I was offered four separate jobs in one whole week. And two of them were in Britain. One of them was back in New Zealand. They were going to make a department for me. And that's three. All right. And then one was at the Ohio State University as a Visiting Professor at some level. To help Goldthwait, Dick Goldthwait, set up the Institute of Polar Studies. And then, Dr. Jaeger who was in charge in Canberra said, "Look, you don't want to take any of those. I will make you a Senior Research Associate and you can stay here." So, we were then faced with five jobs. And we spun coins, did Gillian and I, and it came down to Ohio.

BS: *On a coin toss.*

CB: On a coin toss. Yes. I guess that if the coin had not come down that way, we would have tossed them again, or something. So we looked up Columbus, Ohio, on the map, and it had got "pig belt" right across and it had got "corn belt" right across and it had got "Bible Belt" right across. And we thought to ourselves, "My God, what is this place? Let's go and see." So we went to the Ohio State University on a 15-month appointment and we stayed for 25 years, which shows that some of us are slow learners. And it was . . . the place was awful. It's a terrible place. But, the job opportunities were marvelous. Just the reverse of the situation in New Zealand. So, anyway, we stayed 25 years at Ohio State and I went as a Visiting Assistant Professor, I guess, and initially I spent most of my time in the Institute of Polar Studies helping Goldthwait, who was a fine man, but a terrible organizer.

BS: *What building were you in?*

CB: Mendenhall.

BS: *Mendenhall.*

CB: Yep. And I worked like the clappers. Lots of graduate students, lots of lecturing responsibilities, and just fine. It was just first rate. Gillian hated it. Because Columbus, as you probably know, is topographically dead, it's culturally dead, and so on. But as we developed friends, it got better. I had a whole bunch of students who worked with me, for me and against me and we're still friends with most of them.

(200)

BS: *You went there in what year?*

CB: In 1961. In March, 1961. That year, I didn't go anywhere, or nowhere significant as far as polar areas are concerned. The following year, when I was sort of more or less up to date with my writing up my research, I went with Loewe, aforesaid, and Henry Brecher, who is still around. Do you know Henry?

BS: *Yes.*

CB: OK. Henry . . .

BS: *He's the first one we first interviewed when we got the grant.*

CB: Oh great. Well, I'd like to see what he says about this same expedition with Loewe. But, we went off to the Sukkertoppen Ice Cap.

BS: *Where's that?*

CB: S-u-k-k-e-r-t-o-p-p-e-n. Southwest Greenland, just southwest of Sondre Strom Air Base.

BS: *S-u-k-k-e-r-t-o-p-p-e-n.*

CB: Sukkertoppen Ice Cap. It's genuinely an ice cap, rather than an ice sheet. And Henry and I and Loewe traversed it and, it wasn't very difficult. It wasn't very far. And I was doing gravity measurements for ice thickness determinations and oh. . . we measured snow accumulation and so on. Just a little preliminary expedition. The reason that I had picked on this place is that it looked as though it would be a good site for long-term observations.

BS: *This was back in '62?*

CB: '62. Summer of '62. And I planned it more or less on the grounds of Walter Schytt's work in northern Sweden, near Kebnekaise, which was a long-term station. He was going to occupy it and planned for 50 years. Well, I thought that Sukkertoppen would do as our equivalent, on our side of the Atlantic. But the cost of getting there was just prohibitive. We had to hire a helicopter and that cost us X-thousand dollars an hour.

B: *How did you . . . were you down near Sondre Strom Fjord?*

CB: Yeah. We were based on Sondrestrom Air Force Base, which was Bluie West One, or Eight was it? Anyway, we had a good time there. We did some good work. But it was obvious that it was going to be far too expensive to be a long-term station. It was too inaccessible. But, Loewe entertained us with stories of Ice-Mitte and denunciation and all this stuff that I mentioned earlier. But it was quite good. That was 1962. I went to the Antarctic again. Did I go in '62? I'm pretty sure I did and most of the subsequent years while our children were growing up. And people keep asking, you know, how many times have you been to Antarctica? All right. 1951, Spitsbergen, 1952-4, British North Greenland. I went on an expedition to Norway on the Austerdalsbrae Glacier in 1955. Then '58-'59, South Victoria Land and '60-'61, Sukkertoppen. In '63-'64, I went to Byrd Station and did the traverse out to the Whitmore Mountains. We got . . . it wasn't my idea. . . a wonderful idea for measuring movement inland in Antarctica.

(250)

BS: *Went to which mountains?*

CB: Whitmore mountains. They are southeast of Byrd Station, oh, 150 miles or so. We did a traverse out there, setting up an aerial triangulation system, but the airplane pilots could never drive in a straight line, so they never managed to photograph from the air our survey stuff. So . . .

BS: *R4Ds?*

CB: I can't remember what they were using.

BS: *Twin engines.*

CB: I know the R4Ds. I guess it was R4Ds in those years.

BS: *Yeah. They had the triangulation.*

CB: Yeah. But anyway, that was Byrd Station. The next year . . . I went on expeditions in '64, '65 - that was to the Yukon and to Alaska. I worked on the Sherman Glacier. Do you remember we had a major earthquake called the Good Friday Earthquake? What was that - '64? Which shook down a large amount of mountain. And the mountain covered the lower half of the Sherman Glacier and I went on four successive years to the Sherman Glacier to look at the glaciological effects of this coverage of the ablation part of the glacier by the rubbish shaken down from the mountain by the earthquake.

And in '65, 1965, I became Director of the Institute of Polar Studies. Goldthwait had been appointed as Chairman of the Geology Department. He'd always said he didn't want to go, but I knew that he wanted to get out of the Institute. Why, I don't really . . . well I do know why and I'm not going to say. And he moved over to the Geology Department and I became Director of the Institute of Polar Studies. And that was a good time. That was a good time. Stacks of money around. And stacks of good people and I hired a whole batch of good people. David Elliot

was one of them, although he came to the university a couple of years before. John Mercer, who was the one of us who was touched with genius. Kaye Everett. A whole batch of good students. It was quite exciting times. I had so many students and so many projects that I worked like a beaver.

BS: *Did you get your money from NSF?*

CB: Very nearly all of it from support from NSF. We got a little bit of support for the northern work from the Arctic Institute of North America and . . .

BS: *Who was your money guy there? Mort Turner?*

(300)

CB: Mort. Mainly Mort. But . . . as director. . . oh gosh. When I became Director, I went along to introduce myself to the people at NSF. Tom Jones was in charge. And Tom looked at me with his little beady eyes and he said, "You know, we have established two polar institutes in this country," and he said, "One of them is a success." Clearly meaning that the Wisconsin Center was a success. And I rather took that amiss. So I said, "Well, why don't you sack the people at Wisconsin and get some good ones there?" I had just been offered the job at Wisconsin, as well, but he didn't know that. Anyway. And I went along and introduced myself to Mort, who became a friend and has remained a friend. And I then went along and introduced myself to George Llano. And I talked to Tom. Didn't like him very much. But I said my piece very forcefully. Wisconsin was a good place, but it was a hell of a sight inferior in productivity to Ohio State at that time and perhaps it still is, but this is just my weighted and biased opinion.

BS: *Byrd's trustees gave his papers to Ohio State Archives. They looked at the University of Wisconsin and didn't like their archives.*

CB: Yeah. An interesting situation there.

*BS: That was my recommendation. You'd better look at your archives because you don't want to get . . . There' a good one at Ohio State.*

CB: Yeah. Well, I went along and talked with Mort and liked him very much. Stayed overnight with him. Then and many, many, many times since. And I went along and talked with George Llano. And George's opening remark to me, and I remember it well, he said, "I have supported terrestrial biology at the Ohio State," and I said, "George, you have not supported terrestrial. You have given awards of public money to some people at the Ohio State. Well I think they've done a good job with it, but *you* didn't give it at all." All right. And this took George aback because he had got his own fanciful ideas of his own importance. And after that, we have become very good friends, and remain so. And George came and spent a lot of time with us here last March, I think it was. I like George very much. He's just sold all of his polar books and he said that he was never going to buy any more. But I managed to sell him a couple, so I was pleased with that. I like George. And at Ohio State, for the following four years, I did quite a lot of work. We started some innovative stuff in Peru with LonnieThompson, who was my Ph.D. student then, and I should have gone also to the Quelccaya Ice Cap, but I'd just taken on a brand new Director's job and I just didn't have time. So Lonnie went, did a good job and has continued to do a good job and now he is really in the forefront of glaciological research.

(350)

BS: *That's who I was trying to think of was at Meserve.*

CB: Yeah. No, Lonnie has never been to Meserve Glacier. At least he might have been, but I don't recall when.

BS: *He was there in '66 for some reason and I met him out there. Because that's how we . . . where did we meet? You know. We bumped into one another when I went to Ohio State one day. Anyway, that's an aside.*

CB: Anyway, I don't think you're right. But I'm not going to argue.

BS: *So anyway, Lonnie was one of your graduate students and he's in the forefront . . .*

CB: Oh, Lonnie was . . . ok. I've had three, absolute. . . four. . . five absolutely superb graduate students. Lonnie's one. Ian Whillans. Ian at the moment is suffering with a brain tumor. **[Oct. 2001: Sadly, Ian died in May, 2001.]** And Gerry Holdsworth, who defected to Canada and has been doing some absolutely first-rate work and Cedo Marangunic, whom you've never heard of. Cedo is a Chilean and he came from Santiago to work specifically with me, which I was very pleased about. Did a Ph.D. with me on the Sherman Glacier, on the mode of implantation of the debris cover that covers the lower half of Sherman Glacier. He worked on that. And a lot of glaciology. A good man. And he, now, has invited me back for glaciological work in Chile, three times - something like that.

BS: *Which glaciers?*

CB: Oh, working with the copper companies.

BS: *That's in northern Chile.*

CB: Say?

BS: *Northern Chile.*

CB: No. Santiago. Central Chile. Santiago area, but the engineers at some of the mines are so ignorant of any matter glaciological that it just is appalling what . . . let me describe one of the situations. There is a large cirque basin near the top of the Andes. The basin is 4000 + meters high. Right in the middle of the cirque basin is a copper deposit, a circular one right near the lowest part of the cirque. The copper company, which is Codelco, the national copper company, worked away at the copper mine for many years. But, obviously the deeper they got the more they had to expand it sideways. And that produced a lot of waste rock which they needed to dispose of and the silly people just disposed of it in the upper parts of the cirque basin where it formed a load, a great load, on the rock glaciers, which they hadn't recognized as being rock glaciers. So the rock glaciers started to move and they moved downhill!

(400)

And whereas previously, before they started loading them up with waste rock, they'd been moving at about 1/2 meter a year, they suddenly found themselves moving at dozens of meters per year and carrying material which fell down the hole. Oh my!

BS: *You mentioned five super students. Marangunic, is it?*

CB: Marangunic. M-a-r-a-n-g-u-n-i-c. Marangunic. All right. Who did I mention? Marangunic.

BS: Ian, Holdsworth, Lonnie, and Marangunic.

CB: All right, and the fifth one I'll mention is Wayne Hamilton. Wayne Hamilton had been a student - where the hell was he an undergraduate? I can't remember. Dartmouth? Anyway, he had been working with Henri Bader. Did you ever meet that man?

BS: *I've heard of him.*

CB: OK. And then we dragged Wayne to the Ohio State University and he asked if he could do a Ph.D. with me and I said, "Fine." And he did a Ph.D. on the dirt content of the Byrd core, initially. We drilled a core at Byrd Station, you may remember, in 1960-something, two, three something like that. 1500 meters of core. And Wayne analyzed this and looked very hard at the distribution of dirt between winter and summer particles, and between now and the last ice age.

BS: *Who did the drilling on that core?*

CB: CRREL

BS: *CRREL?*

CB: I think it was a CRREL hole.

BS: *Tony Gow? Was it . . . ?*

CB: Tony was one of the people, yes.

BS: *Who were the drillers? Was it Bill Jacoby?*

CB: I honestly, I can't remember.

BS: *They used an oil rig for that.*

CB: Yeah.

BS: *That was Bill Jacoby. He was my head driller at Point Barrow.*

CB: So anyway, Lonnie - upstairs, this morning before you came, I was going to look at e-mail and there is a request from Wayne that I edit the paper that he's just written on dendro-chronology - the effect of wind on the tree-ring growth. So, he remains a good active scientist and I'm very pleased to be able to edit it.

BS: *How many doctorates did you sponsor in your career?*

CB: Fourteen at the Ohio State. Nearly all of them in glaciology and a surprising number of them have remained in glaciology. Well, like Lonnie and Gerry - Wayne not. And Cedo. And I guess . . . oh and Olav Orheim too. I must mention Olav. Do you know him?

(450)

BS: *The name.*

CB: Olav is Head of the Norwegian Polar Institute.

BS: *Yes, that's why I know him. Odd Rogne was a very good friend of mine. And Torre Gjelsvik.*

CB: What's this?

BS: *Norwegian underground. He's the one who blew up the German barges that were taking the heavy water to Germany. Killed a bunch of Norwegians doing it, but they had to do it. He's a national hero. He can walk on water. The King - he calls the king and says, "Can I come over?" and he just . . .*

CB: Well, anyway, Olav took over from Torre.

BS: *Orheim?*

CB: Orheim. O-r-h-e-i-m. Olav was a good student, and he came again. . .

*BS: He did his doctorate at Ohio State?*

CB: Yeah. I was his supervisor. Yeah. So I had a bunch of good, good people.

BS: *We were about 1960's . . . you were talking about Lonnie Thompson and then we . . . you named all these people and I thought I ought to write them down.*

CB: OK. And I continued as Director of the Institute 'til 1969. And 1969 was a very, very good year in many ways, but I'll only mention one. After our initial repulse by the head of Deep Freeze, whoever it was, whether it was Reedy or his predecessor, I tried many, many years to get women to the Antarctic and when I came to Ohio State in 1962, we submitted a proposal to NSF and we actually named a woman on that one and it sticks in my mind that it was Ann Davey. You never heard of her. Ann Davey came to Ohio State on a one-year fellowship or something and I put her name on the proposal that we sent to NSF and they promptly rejected it because it was a female. And some years after that - I should say that again. For each of many years after

that, I submitted a proposal in which sometimes I could name a woman who would be suitable and sometimes I couldn't.

(500)

All right. There was Ann Davey and then the German-Swiss girl, who was desperate to come and do a Ph.D. with me. We submitted her name. What the heck's her name? **Almut Iken.**Well, I couldn't in all conscience encourage her to come to Ohio State because the chance of getting her to the Antarctic was zilch. So, instead I sent her off to my buddy Fritz Mueller and she did a Ph.D. on White Glacier up in Northern Ellesmere. Almut went back to Germany, and then went to Switzerland and was working with . . . come on, come on . . . Hans Rothlisberger and continues to be a first-rate glaciologist.

BS: *Then you submitted it again.*

CB: And they all were rejected. And then in 1969, NSF and the Navy, and the US Navy, relented. We managed to include some women in on the ships.

BS: *Mary Alice McWhinnie.*

CB: Mary Alice McWhinnie had wintered over at McMurdo with her assistant who was a nun. I can't remember her assistant's name. All right. So in 1969, NSF and Mort Turner, my old friend Mort, said, "Right. You can send a four-woman team to the Antarctic. They have to all be women." I don't know what he was afraid of. And, oh. . . . "as long as they all had polar experience," which is something to make it interesting and difficult. The leader of the party was perfectly obvious. It was Lois Jones and Lois had just finished a Ph.D. in our department on Rubidium-Strontium ratios in Antarctic rocks and therefore she had Antarctic experience, didn't

she? Numbers Two and Three were Kay Lindsey, who was married to John Lindsey, who was another of our students and had been to the Antarctic lots of times. And Eileen McSavenney who was married to my Ph.D. student, Maurie. **[Kay also died earlier in 2001.]**

(550)

BS: *M-c-S . . ?*

CB: M-c-S-a-v-e-n-n-e-y. McSavenney.

BS: *Kay Lindsey, Eileen McSavenney. You don't remember the last one.*

CB: Yeah. I do. Her name was . . . I can't remember. **[Terry Tickhill].**

BS: *Doesn't matter. It's an aside and it changed a bit. I talked about having people die on me before we could get to them and Lois Jones was one of them. Very enthusiastic about a year ago at sitting down with me.*

CB: Yeah. Presumably she died of kidney problems. She had kidney problems when we sent her to the Antarctic and . . .

*BS: Yeah. It was non-alcoholic cirrhosis of the liver.*

CB: Could have been, indeed. Anyway, Terry Tickhill was Number Four. Terry Tickhill had no polar experience but she was very good at stripping down either radios or motorbikes.

BS: *Tick. . . ?*

CB: T-i-c-k-h-i-l-l. You know, Terry was a very competent person. And off they went to the Antarctic and everybody was expecting them all to fall flat on their face. And they made just about the same number of mistakes, like burning the tent, as a bunch of four neophyte males would have done. But no more, no less. Which is what I expected all the way along. So I take credit for liberating a whole continent. Now if you talk to Mort Turner, he'll say that he did it, and so on. Well, obviously it was a lot of joint work. But I had a major part in it.

BS: *Finn Ronne would have argued with you.*

CB: When I . . . when it became known that we at Ohio State were sending a bunch of four women to the Antarctic, I got complaints from a whole bunch of people.

(600)

Bob Rutford said that I was a . . . No, no. It was not Bob Rutford. Bob Rutford . . . Paul Dalrymple. You know Paul, obviously. Paul wrote to me and said, "You're a traitor." And so on.

BS: *Paul?*

CB: Paul. Dalrymple.

(End of Tape 1 - Side B)

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(Begin Tape 2 - Side A)

(000)

BS: *Anyway, just finished talking about Kay Lindsey, Eileen McSavenney, and Lois Jones.*

CB: The first women's expedition, yeah.

BS: *And it worked out. Did you know Captain Kelly Welsh over there? Did you meet with him?*

CB: Kelly Welsh? Oh yeah.

BS: *He says that he championed it.*

CB: Oh, well everybody did. But in fact, it was me.

BS: *Yeah. Well the Navy had changed by then, but it was in the throes of changing all of this. Did you have any problems with the women out there of helo guys. Did they support it?*

CB: I think so. You know, I never met any opposition except from the likes of Paul Dalrymple and Bob Rutford and so on and so forth.

BS: *Well, they blame the Navy for not supporting all this and it was really the Navy higher-ups than the Deep Freeze Admirals at McMurdo. I think they, to be quite fair, I know for sure that they said, "Hey, we've got to change. We're doing it in the Arctic, why not in the Antarctic?"*

CB: OK. Well anyway, it made a good story for many, many years afterwards of how I liberated a whole continent for women. And the best comment that I ever got back was during an interview for a job somewhere and I said, "I've liberated a whole continent for women." And

some old dear stood up and she said, "Well, who the hell gives a damn?" Which I thought was quite meaningful. You know, if it had been a worthwhile continent then fine, but it was just the Antarctic, anyway. And that was what, 1969. And I went on another couple expeditions after that. I took a party to Deception Island. Well, Olav Orheim had been working on Deception Island and he'd done some good, good work. He first went in 1969 if I remember. When was the volcanic eruption? '68, I think. And . . .

BS: *Well, there was one in '67 because I was down there when it blew, in McMurdo and we were listening to it on the radio, scream for help. If I could, by the way, I'd like to copy that.*

CB: OK. '71-'72, supervised the Deception Island Project. Yeah. And that was the last full-scale full expedition that I had in the Antarctic. Because that year, '72, I became Dean at the Ohio State and . . .

BS: *Dean to the University?*

CB: No, Dean of the biggest college, which was Math and Physical Sciences, in 1972. And that effectively ruined my career because I never had the chance to go back to the Antarctic as a working stiff. And after that, I just became an administrator. I was on the . .

BS: *Were you on the Polar Research Board?*

CB: Polar Research Board. National Research Council in Geophysics. Arctic Institute of North America - I was on the Board of Governors. Council of the International Glaciological Society. And US representative to various groups on glaciology or scientific whatever. I was Chairman of the SCAR working group on glaciology for 12 years. From 1973, or so . . . when the heck was it? Until I retired in 1986.

BS: *And what did you . . . in '72 you became Dean?*

CB: I think it was '72, I became Dean. And . . .

BS: *OK. And you retired?*

(50)

CB: I retired in '86. Beginning of '86. Well, it became a question of priorities, you know. I'd been Dean of this monumentally huge college. I'd managed to run the college with an office staff of four people, whereas most of the Deans had 10 people running the college and I reckon that most of them were just spinning wheels. So, my first job was to sack everybody. And we ran our college and we won half of the total university awards for outstanding teaching and outstanding research, which I was rather pleased with. And I was being solicited for university presidencies and so on. And the more I looked at university presidencies, the less satisfactory a job it seemed to be. You know. I took note of the people I knew who had been university presidents, to stick with the post. Larry Gould had been highly successful. Jim Zumberge had been at least moderately successful. Rutford had been, let's just say, not been so successful, I hear. And the more I looked at the job, the more one-handed it seemed to be. You were either glad-handing politicians or holding your hand out for money. And the more I looked at it, the less I liked it. And I said to myself, there are many, many other things in life that I wish to do other than run a college, including writing and running a book business. And what I said in the end was, "I am going to retire." And by chance, we had just put into place a system that would allow me to retire at the age of whatever it was . . . 57. And I duly did that with a very small pension, accordingly. And we moved rather shortly after that to Bainbridge Island.

BS: *But you've been back to the Antarctic with tour groups many times.*

CB: Oh, sure. I was first on the *Lindblad Explorer* in 1971, while she was in Deception Island, as we were. Since then, I've been with that ship and others, on cruises. Eight, I think it is now. Something like that. About eight. And my only reason for doing it was that this offers me an opportunity to take my wife to see some of the places that I'd been to.

BS: *It's on my notes that I've sent out to all of the people in the Polar Society - this is your opportunity to take your wives to show them what you've been talking about for 60 years.*

CB: Yeah. Exactly.

BS: *And some of the guys have taken me up on it, but only a few. They all want to lecture, and I say, well hey, you've gotta make your own room to lecture. I can't get you the job. Here's IAATO's number. Get the list of tour companies and start calling them.*

CB: Sorry. What was that name again?

BS: *IAATO. International Association of Antarctic Tour Operators.*

CB: Oh, yeah.

BS: *They all want to go for free. If they don't want to come, well. . . it's up to you. So I'm sorry I even put the flyer out because _____ before that, we had a whole shipload. There must have been 15 people asking to do it. What do you think of tourists down in the Antarctic?*

CB: Oh, I'm all in favor.

BS: *Do you think they support the environmental concerns of the continent?*

CB: Look. I started work in the Antarctic in 1958 and the biggest bunch of polluters in the Antarctic at that time was # 1, the US Navy. # 2, perhaps the scientists, the US scientists. I'm excluding the New Zealanders from this because the New Zealanders were always a heck of a sight tidier than the Americans.

BS: *Because they're smaller. And they put their garbage in our dump.*

CB: Yeah. No, I'm all in favor of tourists in Antarctica. After all, we, you, are spending US taxpayers money and it helps a little to have some aficionados, some enthusiasts, who will support that spending of taxpayers money. So I'm all in favor. Some of the things that we produce are rather ludicrous, you know, like the Antarctic protocol on non-indigenous whatevers. On one of the tour ships that I went on, they had to hide the palm trees that had previously been somewhere prominent because an inspector was coming on board and this was non-indigenous and you were not allowed to take that to Antarctica.

(100)

BS: *Well they've grown the stuff in greenhouses for years.*

CB: I know that.

BS: *I went to visit the French at Dumont d'Urville, and they had parakeets in the middle of a penguin Colony.*

CB: All right. OK. That's good. That's good. And I haven't heard that one.

BS: *And they had a cat. Sounds funny. The penguins hadn't been at Dumont D'Urville and they moved in after the French came. Adelies. But this cat came out when I was standing there, looks like this and goes running for this other building. The door was open. And these Adelies started chasing it. And somebody happened to close the door before the cat gets there and by then the Adelies had blocked the escape route back to the other building and they started pecking this bugger.*

CB: Lovely, lovely.

BS: *And anyway, the French guy I was talking to was the pilot who was drinking?. I didn't know he was the pilot. He flew me back to the Herc on the skyway on the mainland. You know they were on an island. He goes over and picks this poor cat up and picks him up and throws him into the building. Did you hear the joke about the 500 lb. canary going here kitty, kitty, kitty? That's how this was. The penguin was as big as the cat. Funny, huh? Anyway, non-indigenous species. They were a little too late.*

CB: The point is that there were large numbers of humans who were slightly non-indigenous on the ship and so on.

BS: *They wanted to get rid of the dogs.*

CB: I'm all in favor of the growth of the tourist industry. All right. Where's it's limit? In one of my lectures on one of the ships, and I can't recall which, I asked the folks how they would limit the number of Antarctic visitors and I got the most heated discussion that I've ever had in any lecture. "You could limit folk by age." I said, "All right. Tell me more." Only over 65. All right.

Only under 65. Depending which side of the line you're on. Uh. . . put the fees up. Put the costs up, so that you're limited obviously by wealth, and so on. Large numbers of worthwhile suggestions. But, no I'm all in favor of those things.

BS: *So you've seen both sides of the tourist thing. You've been seeing it from the professional side and then from the tourist side too.*

CB: Yeah.

BS: *Have you seen the tourists misbehave in any of the rookeries?*

CB: No, not ever. Not ever. I became policeman on several of the Antarctic trips. And never have we had the slightest trouble. The only bit of scrap. . . the only bit of scrap that I've ever picked up was a safety pin and that was on Deception Island. My wife found some bits of plastic that had been thrown away by another tourist, but they are very, very good. Very, very tidy.

BS: *I'm going to switch the subject here. You were at Cambridge. You've seen the growth of SPRI. Gordon Robin managed most of that. Have you had much to do with Gordon?*

CB: Oh, absolutely. Gordon, when I first knew him, was a junior lecturer or maybe a lecturer in physics at Birmingham University. And I was a student. And the talk that I remember Gordon giving was before he went down to Signy Island as a station leader, or just one of the scientific staff. But he went to Signy for a year, I guess, in when? Oh, 1948, perhaps, **with F.I.D.S. - the Falkland Islands Dependencies Survey, which became B.A.S., the British Antarctic Survey.**

BS: *Well, he was on the International British Norwegian-Swedish Expedition.*

CB: Oh that's right. He was a member of the Mandheim expedition, 1949-52. No, not really. 1950-52. But that was later. That was after the Signy episode. Signy, I guess, was 1948. All right. Then he went to Mandheim as third in command.

(150)

Well, I knew lots of the Mandheim people. I never met John Glaever, but I knew Walter Schytt extremely well. In fact, I invited Walter to come to Ohio State as a Visiting Professor and I went as a Visitor to his field station and so on. And then Gordon went to Canberra. He is from Australia. He went to Canberra as a Lecturer in geophysics and rather shortly after that, before he got himself established in Canberra, he was invited to come to the Scott Polar as the Director and quite a lot of us were rather surprised that they picked on Gordon at that stage. But he did a first-rate, clinking good job and when he quit, I dithered with the idea of applying for the job myself, but then when I found out what the salary was, and compared with what I was getting at Ohio State, we just let it die. So I never even bothered to apply.

BS: *A lot of people have been brought from England to Ohio State. You did that, I assume. At least you must have started the flow.*

CB: Um-hum.

BS: *Some very top rate researchers.*

CB: Thank you. Yes.

BS: *The connection of the Byrd Polar Research Center - SPRI.*

(200)

CB: Yes. Oh, SPRI is certainly the senior research institute in polar matters in the world, I guess. I can't think of anywhere comparable. OK. It, as a research institute, has had it's up and downs. It had it's ups in the 1950s and then with one or two of the successive directors, it fell by the wayside. And how John Heap is doing now, quite honestly, I don't know?

BS: *He's leaving or he's left.*

CB: Has he left? Right, he's left and Scott Polar is no longer an independent entity. It's now part of the geography department again and I think that this is a backward step if ever I've seen one, because it won't save money and it does lose an awful lot of prestige. And Gordon must be quite hurting that it's lost its independence. **[Oct, 2001: Heap is still the Director. He just called me to ask me to give a lecture on Scott, at the R.G.S.]**

BS: *Yes. It's a shame. How about the Byrd Polar Research Center? How do you feel about it's development?*

CB: Oh, it's . . . Dick Goldthwait was the first Director. I was the second Director and Dick worked awfully hard and I worked awfully hard in two regards. Number One was picking up Dick Goldthwait's bits and pieces and secondly, in trying to develop the staff and access the money. And it was all very highly successful, I thought. We got some good, good people. I mentioned Kaye Everett and John Mercer and David Elliot and several others as well. All right. Then my successor was Rudy, Emanuel Rudolph. Rudy was a laid back sort of person. And he coasted rather a lot. Then David Elliot came along and David stayed too long as Director, but he was very effective, especially in his first years. David was very, very good. But I've seen what happened to several other comparable institutes, particularly with the Arctic institutes.

BS: *Arctic Institute?*

CB: Arctic and Alpine Research - what the heck is it called?

BS: *Institute of Arctic and Alpine Research.*

CB: Yeah. INSTAAR.

BS: *What's INSTAAR?*

CB: INSTAAR has had the present Director who shall remain nameless. . . or I can name him. He stayed on too long as director. And the place went rapidly downhill. But eventually they got themselves back together again. David Elliot stayed, I thought, just a little too long as Director, but most of that was because it was very difficult to find a replacement. And who came along? Ken Jezek eventually came along. I'd known Ken when he was a graduate student with Charlie Bentley at Madison, Wisconsin. And Ken, I think, did a good job, though I sort of lost a lot of day-to-day contact with the institute at that stage. And I really don't know Barry Lyons at all, the current director, recently appointed. But he's certainly got a good, good scientific reputation.

BS: *He's speaking at the symposium. You claim to have found Ken Jezek?*

CB: No, no, no. I didn't.

BS: *The reason . . . I've got an interesting story to tell on him. I'm interviewing Martin Pomerantz, of course, as a cosmic ray researcher, South Pole, astronomy, and he said we started an awful lot of guys through his program since it's polar research. He says, one of them that*

*really surprised us is Ken Jezek. I don't know if he had to do with you. He says, "Oh he's the guy we had winter over.*

(250)

*He was an employee. We taught him to manage the cosmic ray building at McMurdo and that's what he did and that was his introduction to the Antarctic. And he nosed around, saw other work going, changed his life and went off and got his doctorate and that's . . . what . But he got started with me."*

CB: With Martin. That's good. No, I make no claims to Ken. I had met him when he was at Madison, but that was all.

Bs: *Yeah. So tell me, now, we may have covered it before, but I just want to make sure. You were there about the time IGY was pumping, the result of IGY was to start permanent programs, basically.*

CB: Oh, absolutely.

BS: *They didn't expect that. In fact, Van Allen told me they didn't expect that. They'd have a Third Polar Year and that would be it. So, the key to getting your grant money at first was through NSF, Mort Turner, or any other individual?*

CB: Oh, well it depends on the nature of the program and who would be the program manager to look at it. But Mort, for the glaciology and for the geology which was mostly my personal interest. And a large part of the total interest of the Institute of Polar Studies. But we had, after the Institute had been going for many years and David Elliot was Director, the opportunity came

of acquiring the Byrd archives. The archival material from Richard E. Byrd. And it was an interesting way of going about disposing of the stuff. They had fixed a price for the archives - quarter of a million bucks. All right. And there was to be an open, academic type of competition amongst the various universities who were interested in acquiring it. Dick Goldthwait and Larry Gould and I and one or two others including Pete Anderson, had a deal to do with this. We wrote the proposal to the Byrd Family Trust, or whatever it called itself. And the people who were in charge. . . and in this we had to say what we would do with the archives.

BS: *Which year was this?*

CB: Ah. . . come on, come on. **About 1972.**

BS: *Were you still at the . . .were you Dean then?*

CB: I think that was my first year as Dean. I think that was 1972. I think that was it. And we made the usual kind of remarks. We will change the name of our Institute of Polar Studies to the Byrd Polar Research Center. OK. No problem with that, except that some of us had a sort of lesser regard for Byrd as a person than others did. And so on. But, Byrd certainly established the US place in polar history, Antarctic exploration and so on.

BS: *He created a lot of careers.*

CB: Oh absolutely. And what would we do with the archives? Number One - we would set up an archives, a proper archives. Number Two - we'll change the name of the Institute from Institute of Polar Studies to Byrd Polar. We will make a small brass plate and put it on the building behind some fast growing evergreens and so on. (That was just a little joke!) David, I thought, was a little bit ____.

(300)

The pressure of space in Mendenhall was becoming excessive and we could not expand against the geology department. We, the Institute of the Byrd Polar Center, could not get more space. But we were offered some prime space over on West Campus and since we had rather little to do with the rest of campus, that was just fine by me and I reckon David should have grabbed it, grabbed the best space when it first became available. But we put it off for a year or two by which time the best space had gone. I still like the quarters they have over on West Campus. They're fine. They're fine.

BS: *They changed the name from Scott Hall to Byrd Hall?*

CB: No, it's still Scott Hall. Who was Scott? Do you happen to know? I presume it's some Ohio legislator or what have you.

BS: *I asked. Nobody knew.*

CB: No. I can find out. If it's of any importance, and I can't imagine it is. We've had some good, good people in the Institute. Some really good, first rate people. I don't mean just the researchers, but Lynn Lay is a jolly good librarian and when she first came, she was very much a junior? and she has grown immensely.

BS: *You use her too much as a gopher and don't let her librarian. . .*

CB: Yeah. I know that. I know that. Well, as ever, we're short of low-level support. Very short. And Lynn Everett has done pretty well for herself, too. We had a very, very good executive secretary - Ray Mercier.

BS: *Just retired.*

CB: Yeah. Just retired and I don't know if they've managed to find an adequate replacement.

BS: *Lynn Everett.*

CB: No, not Lynn Everett.

BS: *She's doing it. Yeah, she sits in the office and she's not supposed to, but apparently they grab her. And she's managing the funds for our grant. Pays it out to . . .*

CB: And will do it very well.

BS: *Yes. So you've seen the development of this from the very beginning, basically.*

CB: Yes, well, Goldthwait had invited me to come along to help set it up. And I was very, very happy to come and I'm not the least bit sorry in the long term, that we came to such a dismal place as Columbus, Ohio. But when it became a question of retiring, as I say, I had decided not to - I decided not to become a university president. I did not wish to return to the department because the folks there included Ian and Lonnie who were a heck of a sight brighter than I was and were doing some first rate work and one never wants to compete with one's own graduate students. So we decided to retire and we came here. We came here because Gillian said, "You know I don't mind living in Columbus, Ohio, but I'll be damned if I'm going to die here." Well,

we stayed a long time. But where to retire to? Shall we go back to Britain? Shall we go to Australia? New Zealand? Canada?

(350)

But in the end, all of our material assets - that is, three children, all lived in the United States and they weren't going to move as far as we could see, so we were going to stay in the US. Where in the United States? Where do we retire? Which country? And we're forced by our health insurance to be in the US. We're not absolutely bound here, but it's a hell of a sight more convenient. Our children are here, so we're going to stay here. It so happens that our children live further away in this country than if we'd stayed in Columbus and they'd moved to Britain because we have a son who works in Washington, DC with the US Treasury. We have a daughter who is in Madison, Wisconsin, and we have a son who lives on the island, but he soon won't live on the island. So we're really scattered.

BS: *Lot of grand kids?*

CB: We have four grandchildren. Yes. Two in Washington, DC and two in Madison, Wisconsin. But we see them too infrequently. And the only advantage that I can see of becoming a grandparent was that you have grandchildren and you can see them and enjoy their growing up. That's all right, but that's ok.

BS: *Well, I think that this has been a good interview. Is there anything that you regret?*

CB: Anything I regret?

BS: *Anything that you would do different?*

CB: Possibly. My God. Well, you know this what-if? game is highly unproductive. What if I'd taken a job in London, you know, I would have been by now, assuming that I'd been fairly bright, which I thought I was at the time, I would have been a Sir by now, in all possibility. I'd certainly be an FRS, and so on. As it is, all I am is just a FRSA - Fellow of the Royal Society of Arts. And this, I think, was a reward for my part in international education, but certainly not for my work as an artist. Certainly not for my work as a scientist.

BS: *That raises a point, that you developed teaching programs, you mentioned, at the university - Ohio State.*

CB: Yeah. We had . . . I developed the glaciology program. I'm not going to comment on the academic qualities of that program. I thought they were rather good, but I certainly produced some good glaciologists out of it, like the ones I mentioned.

BS: *That was a graduate teaching program?*

CB: That was entirely graduate. No, I never had an undergraduate. In fact, that's why I became Chairman, because if I hadn't become Chairman of the Geology Department, they were going to make me teach a geology 100 course which would have been indeed frightening, wouldn't it?.

(400)

BS: *Yeah.*

CB: No, I'd never taken any courses in geology for credit when I became Chairman of the Geology Department - they couldn't think of anything else for me to do.

BS: *You're familiar; certainly with the way the British system produces their doctorates as compared to the American system that requires many more courses, mandatory. Which is best?*

CB: You know, I imported a large number of British or British style, which includes Australia and New Zealand, bachelors people and they were better prepared than were the American undergraduates. They could think better, but by the time you get through a Ph.D., there's not anything to choose other than the ability of the person. So that, you know, the British Ph.D. will have a much narrower field of training, but will have a better ability to think and obviously, one shouldn't make any sort of broad statement like that.

BS: *It's still individual.*

CB: Yeah.

BS: *Well, I had the same observation after a year at Scott Polar. They produce pretty sharp guys. The trouble is, they don't produce as many and not A form, B form. It's not the best way to go, as far as I'm concerned. You don't have any late bloomers. It's hard to make a late bloomer. The United States is kind of famous for late bloomers. Some people get their act together late in life. My son's one of them. He got his degree at 32. Well, that's interesting because you've seen this from both sides. You still retain your British citizenship?*

CB: Oh no, no. One of the reasons, and I bring this up largely for fun. One of the reasons that I'm an American citizen is Larry Gould. I became the US representative of SCAR, initially on the SCAR committee on glaciology and Larry said to me one day, "You are an American citizen, aren't you?" And I said, "No." And he said, "How come you are the US representative on this international body?" Why, that wasn't the only reason that I became a US citizen. At that time,

I'd got some pretensions to becoming a university president. And it's rather more difficult as a non-American to become a president of an American university, and so for that and a dozen other absolutely trivial reasons, I became a US citizen, when? Somewhere in the late '70s.

(450)

BS: *Been over here for a while.*

CB: Yeah. We came in 1961, so that's well nigh 40 years now.

BS: *My wife's got you beat. Took her 32 years. I said, "You don't have to do it if you're going to lose your Dutch Social Security."*

CB: Oh, does she get Dutch?

BS: *She would get free nursing home care.*

CB: Now there is a very big monetary disadvantage to not being a US citizen.

BS: *There is?*

CB: Oh, very definitely. I assume that we are all going to die. And while that isn't my ambition, it's moderately inevitable. If I die as a British citizen, I do not get this $625,000 death duty allowance, I suppose you could call it.

BS: *Estate?*

CB: Estate allowance. So it really makes quite a bit of difference. So, with a wife as well, if we could ever reach the stage of having 1.2 million dollars, which seems highly unlikely still, but you know, you're looking at estate taxes. I don't know what they are. What are they? Estate taxes on a million bucks? Anyway, that's what we're attaining by becoming citizens.

BS: *39 %. I'm pretty sure it's 39%.*

CB: Is it? I don't know what it is? But we're never going to reach the stage. So anyway, that's not the only reason that I became a US citizen. My wife had a rather different reason for becoming a US citizen. We lived on the island and we did not like the mayor, so she became a US citizen so she could vote for her choice of mayor.

BS: *I think we're done.*

(End of Tape 2 - Side A)

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**End of Interview**