

RON LEWIS-SMITH

Edited transcript of interview with Ron Lewis-Smith, conducted by Chris Eldon Lee, at his home in Moffat, Scotland, on the 10th of April, 2011. BAS Archives AD6/24/1/114.

Transcribed by Allan Wearden, July 2017.

[Additions in square brackets inserted by Lewis-Smith during editing to clarify a preceding word or sentence, or correct a transcription error. Nov. 2020]

[Part 1:00:00:00] Lee: This is Ron Lewis-Smith recorded by Chris Eldon Lee on the 10th of April, 2011. **Ron Lewis-Smith Part 1.**

Lewis-Smith: Well, I am Ronald (Ron) Lewis-Smith and I was born in Aberdeen on the 29th of January 1942.

[Part 1:00:00:21] Lee: So you're now 69?

Lewis-Smith: 69, so they tell me, yes.

[Part 1:00:00:25] Lee: OK, so I've seen your name expressed with or without a hyphen, which is correct?

Lewis-Smith: This has been a bone of contention for a long time. The hyphenated version is the correct one. The un-hyphenated version tends to have been used throughout my publications, because Dr Ray Adie, who was Deputy Director for a number of years, was also the editor of the *BAS Bulletin* in which we were encouraged to publish our papers in the early days. And for some unknown reason he didn't like hyphenated names and he refused to put a hyphen in for my surname, so I'm afraid I've been Lewis Smith - no hyphen - for a number of years ever since, as far as my publications are concerned!

[Part 1:00:01:16] Lee: Did you argue the point with him, or was it...?

Lewis-Smith: Yes, I did! There's a similar problem with place-names in the Antarctic. If some feature is being named after a person with a hyphenated name the full name cannot be used and they use a part of that name, and I have had that experience as well!

[Part 1:00:01:42] Lee: Well you have two landmarks named after you I think, haven't you?

Lewis-Smith: I do, yes. I have Lewis Pass on South Georgia, which rather ignominiously was applied to what had been previously known as Dead Man's Cairn or Dead Man's Pass which lies between the whaling station at Grytviken, South Georgia, and a very scenic area called Maiviken. I actually proposed a different name for this feature and (what's his name?) Geoffrey Hattersley-Smith, who was chairman of the [*Antarctic*] Place-Names Committee said, 'Oh we won't use the name that you have suggested [*Vista Pass*], we ought to name something after you, so we'll name the pass after you, but we can't have the hyphen in so it will have to be Lewis Pass'! And the other feature which I'm rather proud of is in the far south of the Antarctic Peninsula, on an island off the west side of Alexander Island called Charcot Island. It's a feature there that I was very insistent on getting to because some geologists had reported that this tiny little nunatak had quite a diversity of vegetation. Eventually I managed to get there, and did a botanical survey of the area, and a number of years later I found that my name had been given to this feature. In this case it was named after my initials RILS, so it is RILS Nunatak! This may sound a bit odd but when I was a very young child, up to about the age of three, a lot of my friends and relatives used to call me by my initials; I used to be known as RILS. So I thought that was quite a nice gesture!

[Part 1:00:03:48] Lee: So the hyphen is not an indigenous feature in the Antarctic then?

Lewis-Smith: No, I don't know of any hyphenated features; there may be but I don't know of any.

[Part 1:00:04:01] Lee: Education then for you, Aberdeen wasn't it?

Lewis-Smith: Aberdeen was where I was brought up. I was educated at Aberdeen Grammar School, and I went on to university there. I never thought twice really about going to any other university, and as it happened the botany course that was run at Aberdeen was a particularly good one, especially in ecology which is what I was really interested in, so I did my four year BSc degree in Aberdeen, yes.

[Part 1 0:04:37] So the decision then that influenced the rest of your life was a degree subject. Can you elaborate on why it was you wanted to do plant biology especially to do with ecological issues?

Lewis-Smith: Well, I suppose it goes right back to my very early days again. My parents were very keen on the countryside. You'd call them naturalists I suppose these days, in an amateurish way. They were always pointing out things, we did a lot of walking in the countryside and hills and they were always pointing things out and going into the details of what was what and why! But even more so, perhaps, my grandfather, my mother's father was also a very keen naturalist, and knew just about everything about anything on a very amateurish basis. He was a jeweller by profession, and a very skilled fly fisher. I can even remember that at the age of three or four him taking me for walks in the countryside, or even in the town of Aberdeen and we just talked about things that he pointed out, and I became very interested in everything around me really. And then as time went by in my later schooldays and at university I did a lot of hill walking. I was particularly interested in mountain ecosystems and all the plants and animals and insects and their interrelationships and that sort of thing. All of this gradually built up my ideas for what I really wanted to do, so it was plant ecology that I specialised in at university.

[Part 1 0:05:37] Lee: Another passion was winter sports I gather?

Lewis-Smith: Yes I was very keen on skiing, I was. When I began, in the mid-1950s, it was really the very early days of skiing in the Cairngorms. My father would take myself and my younger brothers who were several years younger than I was. We went up to the Cairngorms, particularly Glen Shee, and I was introduced to skiing there. I learnt using a pair of his ancient Norwegian wooden skis, which were almost impossible to manipulate on the snow and also very heavy to carry, especially when you are about 11 years old! But yes, over the years I sort of progressed a bit with my skiing skills and also very much enjoyed them, and used them, not with any great ability, but I used to ski a lot in my travels in the Antarctic.

[Part 1 0:07:41] Lee: Well, I think I can see the answer coming towards me now, but was it those two elements that combined to generate your interest in the Antarctic? And how did you first become aware there was such a place?

Lewis-Smith: Well, when I left school and went to university, it was biology that I wanted to do. I did botany and zoology but I was rather concerned where this was going to lead. I wasn't really very sure about what kind of careers were available if you were going to be studying plants or

birds or other animals, or anything in that line, and it was - well there were two things - to jump back a little bit! I was also a very keen Scout, a Boy Scout, in my younger days and then later a Rover Scout as they were then, and when I first joined the Scouts my Scout Troop was the 1st Aberdeen Grammar School Scout Troop. And at about of the age 11 or 12, I discovered that a very famous Antarctic scientist had actually been a member of that same troop. That was 'Scout' Marr, James Marr. Now, the fact that he had worked in the Antarctic sounded like a very promising thing to do! That sounded very exciting and, let's think now, oh yes, it was a number of years later, in fact, when I was at university, I went to a lecture given by Jimmy Marr, at the university, I think it was, and he spoke about his time [in the Antarctic], because when he first went south he was with, as 'Scout' Marr, he was on Shackleton's final expedition on the 'Quest' Expedition. I also met him around that time. [*James' brother Douglas was at school with my father!*] And that was all very exciting, that's when I first learnt about Antarctic exploration, and particularly Shackleton. Now, by coincidence, it transpired that I had a not quite next-door neighbour but, within a few hundred yards, a neighbour who was also with Shackleton's expedition, in fact both of them - the 'Endurance' Expedition and the 'Quest' Expedition! This was Alec Macklin. By coincidence, his wife was at school with my mother so I was introduced to him, and I went to a lecture that he gave at the university using a wonderful set of old glass plate photographs and a huge, ginormous projector!

[Part 1 0:10:48] [?]

And so I found out more about Shackleton's expeditions, life in the Antarctic and all that sort of thing. So there I was having met Marr and Macklin, who was the doctor or surgeon on Shackleton's expeditions, and the next thing that transpired was that the family that my family used to sit next to in church, happened to have Antarctic connections as well! And that was the family of Robin Smart who was the doctor on the Trans-Antarctic Expedition, Fuchs' expedition! So that was another interesting contact I had, information fed to me about what it was like on the Trans-Antarctic Expedition, so I was getting quite excited about this Antarctic place! And being very interested in geography I found out a lot more just by reading about it, so one thing led to another and, at the end of my time at university - just before I graduated - the opportunity arose to apply for a job in the Antarctic!

[Part 1 0:12:08] Lee: Did Macklin and Marr build a picture of a place in your mind, when you were still at university, you were in your early 20's by then I guess? [Lewis-Smith takes a deep breath!] So, talking to these two veterans - polar explorers - were you building up a picture in your mind of what you might expect?

Lewis-Smith: I think I made a mistake regarding when I met Marr. I wasn't at university - it was during my latter years at school - late 1950s.

[Part 1 0:12:32] Lee: So you were in your teens then?

Lewis-Smith: Late teens yes! Well it was the slides that they showed, whether they were the old glass plates or more modern ones, that gave me a very good insight into what the Antarctic was all about!

[Part 1 0:12:53] Lee: When you finally got down there, do you think they gave you a true representation of what it was like to be there, or was it a bit rose-tinted spectacles?

Lewis-Smith: No. I think they gave me a very good idea of what it was like. You have to remember in Shackleton's day - you're talking about the period between 1910 and well 1914 and 1921 - things were a little bit different then. And travel conditions, everything to do with

exploration in those days was quite, quite different to what I experienced when I got there, but I mean the general atmosphere that they presented was very much as it is, and was when I went down.

[Part 1 0:13:36] Lee: Did they have the air of heroes about them, did you look up to them?

Lewis-Smith: Not really. They were from the 'Heroic Age', very much so, but the way they [Macklin & Marr] described their time in the Antarctic, and all their exploits, especially the 'Endurance' Expedition, that was something else! It really is a most incredible story that, but the way they presented themselves, they didn't make themselves out to be heroes! They were doing a job and to have survived, especially in Macklin's case, they were very, very fortunate!

[Part 1 0:14:22] Lee: You went to his house a few times I think didn't you?

Lewis-Smith: Yes.

[Part 1 0:14:25] Lee: What do you remember of that?

Lewis-Smith: Oh, it was a lovely old fashioned house that was still, still kind of Edwardian I suppose you'd call it - bookcases stuffed with books of exploration in the Antarctic - of the era that he was associated with, various other memorabilia from the expedition. One fascinating book I can't remember exactly which one - probably 'South', the one that Shackleton wrote. It had most of the expedition members' signatures in it. It would be worth a fortune these days! In fact, it's just possible that SPRI bought that book when it was auctioned, but I'm not sure. It was very interesting. I had long discussions [with Alec]. In fact, a while after his death, when I went back I wanted to have a look at some photographs that I knew he had of South Georgia, so that I could compare the situation in 1915 I think it was, with what the situation was when I was there in 1970. And so his Jean, his wife, lent me a whole pile of these photographs, and that was very interesting. Then she said 'I've got all his diaries here'! These were in his beautiful handwriting, and she said 'Would you like to borrow these and just to read through them for interest'? So I had these in my possession for several months and it was very, very fascinating. I might add that they were sold, these diaries [of both expeditions and the rest of his library] were sold by Sotheby's or one of the big auction houses only a few years ago and they fetched about a quarter of a million pounds! And I think it was SPRI that bought them, but to have had these in my possession for a while was really great! And also she lent me his glass slides and his massive great projector which was about a metre long! I was able to take these down to Birmingham, where I was based at the time, and give a slide show of these original Macklin photographs exactly as they had been shown in his day!

[Part 1 0:17:07] Lee: There were another couple of famous Antarctic explorer names that you got to know before you went. One was a chap called Alistair Hardy, you met him occasionally?

Lewis-Smith: Not occasionally, just on one occasion which would, I think, be about 1963. I was President of the Biological Society then and we were putting together a list of speakers, and [Sir] Alistair Hardy was one of them. So yes, we got him up to Aberdeen and I wined and dined him before the talk that he gave. We'd quite an interesting chat and of course he was famous for his oceanographic work on the 'Discovery' Expeditions around South Georgia during the 1930s.

[Part 1 0:18:00] Lee: And the other was Peter Scott, Captain Scott's son?

Lewis-Smith: Ah yes, Peter Scott. Well, he became Rector of Aberdeen University, just about the same time as Alistair Hardy came up, and from then onwards I had intermittent dealings with Sir

Peter, and of course he became president of, and the founder really, of Falklands Conservation, and I became a member of that committee. He invited me to give a talk at one of their meetings at the RGS, their annual reunion one year, and I gave a talk on a particularly interesting place I had spent some time at, in the Falklands [Beauchêne Island], and that was an experience! But that association actually goes back a good bit further as well. My uncle, my great uncle he was, was an ophthalmic surgeon in Aberdeen, but he also had a wildfowl sanctuary near Aberdeen [Newburgh]. Before the war, the Second World War, my uncle, who was very keen on water fowl and had several ponds, large ponds, with a whole lot of exotic ducks and geese. He was in correspondence with Peter Scott who, at that time, was living in a windmill on the Norfolk coast. It was just at the outbreak of the war and Peter Scott was very worried how he was going to look after his birds and had to give most of his collection away. My uncle offered to take any that he wanted to part with and look after them up in Aberdeenshire, because things were likely to be much safer up there but, in fact, by that time he'd already given most of his birds away! But my uncle did take several of a very rare species of goose from Southern Australia [*Cape Barren or Cereopsis geese*] and bred them for many years in Aberdeenshire.

[Part 1 0:20:27] Lee: All this was adding up to an inevitability that you would end up working in the Antarctic I think, isn't it? So tell me about applying for the job. Did you see an advert or did they come and select you?

Lewis-Smith: Well it wasn't quite as simple as somebody coming and selecting you, but no there wasn't an advert as such. But in my final year at university and just before sitting my finals I heard about somebody who was coming to give a talk about the British Antarctic Survey - it was a sort of recruiting talk for jobs in the Antarctic. This was Bill Sloman, the name has cropped up before, and....

[Part 1 0:21:10] Lee: The famous 'milk round', wasn't it!?

Lewis-Smith: Oh yes, that's right, the 'milk round', yes that's what it was called! And this person was going to come to Aberdeen University and give a talk on the Antarctic and some job opportunities that were coming up. They were mainly for geologists and a botanist, so this really opened my eyes to the Antarctic! There were all these wonderful photographs and of course we were into the colour slide era, so the Antarctic looked absolutely wonderful! And so, lo and behold, they happened to be wanting somebody who had exactly what my interests were and, as it happened, what my degree subjects were, so he said, Bill Sloman said that, at the end of the lecture, if anybody is interested in applying for the two or three jobs that were on the go, to come and see him afterwards. So I duly did that, not quite knowing what I was doing, but the next thing was a case of 'Thank you very much, we'll let you know'! About a week passed and then I had a phone call saying would I come down to London for an interview - which I duly did!

[Part 1 0:22:31] Lee: From Aberdeen!?

Lewis-Smith: From Aberdeen, yes. Mind you I don't think there was anyone else who applied! So I went to London and had an interview, which was the most informal of interviews that can be imagined, over a cup of tea and some biscuits and a general chat, ending in 'Well, we'll let you know'! I don't think it even got as far as that but something like 'I guess you seem to be the right person for this job, when can you start?'! And that was it. Not quite so easy these days, no!

[Part 1 0:23:07] Lee: But you weren't actually that well qualified for that particular role were you? They were looking for somebody that was an expert on cryptogams?

Lewis-Smith: That's right yes, well people of my age at the time, you know - we are talking about 22ish – aren't usually experts in things as obscure as cryptogams at that age! But I'd done quite a bit. Just to explain - cryptogams include all the non-flowering plants such as mosses, liverworts, algae, lichens, fungi - things like that. I happened to have done one or two courses on mosses and liverworts and a bit on lichens, and was quite interested in them and how they related to other plants as components of various ecosystems, especially in the Highlands. So I had a bit of a qualification, by no means an expert but probably as much as anybody else might have had at that stage in their life!

[Part 1 0:24:17] Lee: Were you surprised to be selected?

Lewis-Smith: Yes totally, I'd no idea it was so easy to get a job! [Much laughter!]

[Part 1 0:24:29] Lee: It's changed a bit now hasn't it?

Lewis-Smith: It certainly has! Yes, when I hear about jobs being advertised with the British Antarctic Survey now, they're getting, even at the time I retired, we were getting up to 500 applications for a single job. You know, it's incredible!

[Part 1 0:24:46] Lee: Might come back to that later on. So what part did Martin Holdgate play in all this, the recruitment of RILS to BAS?

Lewis-Smith: Martin was a fantastic person. He was the person who interviewed me, gave me my cup of coffee and biscuits, and so it was he who said 'Yes, he's the guy for the job!', for which I was very grateful. The next thing that happened was that, once I was appointed, I had various arrangements to make because I wanted the work that I was going to do in the Antarctic to count towards my application for a PhD. So I would have to remain based at Aberdeen for the next few years, even when I was going to the Antarctic in-between and that the Botanical Section, as it was then, was based in Birmingham University. So before I got very far I was asked to go down to Birmingham and be introduced to the chap who was Head of the Botanical Section, Stanley Greene. We had a chat about the sort of work that I might do, and he said 'Right, well this chap Martin Holdgate has just recently come back from the Antarctic. He'd been working on Signy and done quite a bit of research himself, though he isn't a cryptogamic botanist and doesn't really know anything about all these mosses and lichens'. But he'd collected a huge amount of specimens, which weren't just nice little delicate specimens as you are encouraged to make if you are making collections, but they were huge chunks of the countryside in great big packets! And then, Stanley in Birmingham said 'Martin's got all these specimens down in London. I think you should go and collect these (I wasn't told how many or how big this collection was) and take them up to Aberdeen and, on the basis of the work that you have done here in Birmingham on mosses, identify the whole lot and see how you get on, and that will form a basis of the sort of work you will be doing in the Antarctic'. So I went to London, met Martin again and he presented me with I think it was three sacks of specimens which I could hardly carry, along with my suitcase! And then I had to take these on the train to Aberdeen, which wasn't too much fun because the train was full and I couldn't get a seat, so I made myself very unpopular by locking myself in the toilet, [laughter!] at least as far as Edinburgh. So I had all these mosses, about half of Signy Island as it seemed in the form of specimens, and I got on and identified all of them. This gave me a good idea of what species were associated with what because these were chunks comprising several different species. Then I wrote up the work which more or less formed the basis of my ecological project that I was going to do over the next two years, before I even went to the Antarctic! [laughter!]

[Part 1 0:28:19] Lee: This was ground work?

Lewis-Smith: Ground work, yes very much so yes!

[Part 1 0:28:22] Lee: You met a couple of current, at that time, Signy FIDS Peter Tilbrook and Barry Heywood?

Lewis-Smith: Yes.

[Part 1 0:28:33] They try to talk you out of it or encourage you?

Lewis-Smith: They had both returned from Signy at the same time as Martin, because the three of them had been at Signy the previous summer. In fact Barry and Peter had been down for two years and just come back, so yes they were very enthusiastic about everything to do with Signy and encouraged me, telling me what a wonderful place it was and how much I would enjoy it, so that was a good beginning I thought!

[Part 1 0:29:07] Lee: There were other people to meet before you went south and one was Sir Vivian Fuchs, who you mentioned already but now you were meeting him formally in a BAS environment. Tell me about him, what did you make of Fuchs?

Lewis-Smith: I met Fuchs, Sir Vivian, each time I went to BAS headquarters which was, at that time, we are talking mid 60's, in Gillingham Street in London. And it was such a small office community compared to what it is today and as far as I can recall, there were only about half a dozen staff and a typing pool. Whenever you went into the headquarters, Sir Vivian was always going to and fro or popping out of his office to somewhere else, and he'd always have time to spend with you! And that was very fascinating, you know, at coffee break or something and he'd just sit down with you and we'd have a chat. It was so informal but what was nice about it was he'd time just come up and speak to anybody! It can't happen these days, it doesn't happen, and for good reasons but he was a very amiable person, very friendly, always seemed to remember your name next time you came back, even though, you know, he'd got quite a lot of other people that were popping in from time to time, but he was a great inspiration!

[Part 1 0:30:43] Lee: Did you see another side of him at all, because there were divided opinions about Fuchs weren't there?

Lewis-Smith: Oh yes. No, I didn't know him that well, or ever spend that much time with him to see another side. I think maybe the geologists of that era who were working closer with him, because he was a geologist himself, may have had some opinions, I don't know! But the only controversial thing that I knew about him was the situation with Edmund Hillary during the TAE crossing, but that's probably something completely different, or is that what you might be alluding to? Sir Edmond Hillary sort of fell out with him, or I think Fuchs fell out with Hillary, and quite rightly so in my opinion!

[Part 1 0:31:39] Lee: What more preparations did you have to make, did you have any safety training or field work training?

[Lewis-Smith:] Field work training? Unfortunately no, there wasn't any, but I was, during the summer of 1964, I'd been selected to lead a group of Senior Scouts and Rover Scouts on an expedition to Iceland. But Martin Holgate said to me 'If you're going to the Antarctic you won't have time to go to Iceland, you've got these sacks of specimens of mine to look at'! Well, as it happened I would have had time, and I think it would have been a valuable experience. But no regrets, no regrets - and what was the other question?

[Part 1 0:32:33] Lee: Well the next thing was about did you have any health and safety training?

Lewis-Smith: Oh health and safety, well in those days, no I don't think there was any health and safety training! Which showed very much once we got down into the field on occasions, but no we didn't!

[Part 1 0:32:53] Lee: Did you have to learn on the job?

Lewis-Smith: Yes, through your own stupidity usually! [laughter!]

[Part 1 0:33:01] Lee: So tell me about the journey south, you must have turned up at Southampton docks to find the 'Shackleton'?

Lewis-Smith: The 'Shackleton' was the ship I went on and, well actually I had a bit of a job finding it because it was tied up alongside the 'Queen Elizabeth' of all ships, and when I arrived at the docks and looked ahead and there's the 'Queen Elizabeth' – massive, looming umpteen decks above the level of the quay! We were told that the 'Shackleton' was lying alongside the 'Queen Elizabeth' but from a distance you couldn't see the 'Shackleton' anywhere. It was only when you walked up to the edge, that you looked down over the side and there it was parked at the back of QE2, no QE1 it was then! So here was this tiny little ship, which might have been mistaken for one of the lifeboats of the QE. When I went on board it really was tiny but very, very homely, and a rather cosy little ship at the time of being tied up, but it wasn't so cosy when you were bucking about on the open ocean!

[Part 1 0:34:15] Lee: Yeah, what were her sea going characteristics then, was she a difficult ride?

Lewis-Smith: Well I guess you would say 'Yes'. I seem to recall that we hadn't gone very far, in fact we had got as far as the Bay of Biscay, when a big storm blew up and we actually went backwards about 50 miles that day! Which wasn't a very good omen, if we were heading to the Antarctic and were going to have even stronger gales probably. But yes, in a rough sea she was all over the place and the destruction of crockery in the dining room and the kitchen was something appalling! But on the calm days going through the tropics it was absolute bliss!

[Part 1 0:35:09] Lee: And you were sharing your cabin with Royce Longton and Inigo Everson, [Lewis-Smith, Oh my goodness!] was this a holy triumvirate!?

Lewis-Smith: Indeed it was, yes. There was probably, no I don't remember if there was a fourth person, but yes Royce and Inigo and myself was an interesting combination! [Laughing!] My cabin mates - great colleagues, great colleagues they were, yeah!

[Part 1 0:35:33] Lee: Why do you say they were interesting?

Lewis-Smith: Well, I guess between us we were all a little eccentric, one more than the others, possibly, but !

[Part 1 0:35:48] Lee: I presume you are referring to Inigo?

Lewis-Smith: Indeed yes, indeed but an absolutely super person, totally mad at times!

[Part 1 0:35:58] Lee: Can you give an example of his eccentricity?

Lewis-Smith: Well, too numerous to count! I remember one funny incident, I suppose it was his fault, I was going to say no fault of his, but I guess it was! When we were on the 'Shackleton' going south he put on the kettle, the electric kettle, for a cup of tea for some of us, and walked off and forgot about it, and the water, the kettle boiled dry. The kettle element melted and went in a sort of blob of metal on the table, for which Inigo was fined half a crown to contribute to buying a new one! But, let's see, probably the less said about Inigo the better I guess, but a great guy all the same!

[Part 1 0:37:05] Lee: Talking about money, at some point it dawned on you that they were going to pay you to go down to the Antarctic?

Lewis-Smith: Well yes, that did come as a little bit of a surprise, because when I applied for the job I was thinking of it as very much as a sort of expedition. I suppose it was really, but it was only when I went down to London and actually had the interview proper, I was informed 'Oh, by the way, you'll be paid so much'! It was £450 [*per annum*] I think, and that came as quite a surprise, not because it was so little by today's standards, but the fact there was anything at all! And then Martin said in a letter that this is being reconsidered and it might well double by the time I actually head south! So £950 is what I was offered, and that was for a year. That sounded incredible!

[Part 1 0:38:17] Lee: Was that all for you or did you have to buy things to take with you, I mean I'm thinking about the equipment you might need to go south? [Lewis-Smith: Ah!] Which I guess didn't already exist down there?

Lewis-Smith: No, that was your salary and, no, that was for you to keep! And it was tax free if you were out of the country for over a certain length of time, but as far as equipment was concerned, well my sort of work didn't involve a lot of equipment, although I did need a few little technical things like thermometers because I was always measuring temperatures, and automatic recorders and things like that. There was an allowance of a few hundred pounds for such items. I say a few hundred pounds, that's all it was, but by today's standards it would be umpteen thousand pounds! But, you know, some of the equipment, very basic stuff, I had to make myself!

[Part 1 0:39:18] Lee: You had to make it?

Lewis-Smith: Yes, and that was a bit of a chore. I can remember making some gadget for drying plant specimens. I had to devise a box with a lot of electric cables with a whole lot of light bulbs in it, and this was just to dry specimens because it was necessary for some of the work I was doing - collecting specimens and they had to be dried before you could packet and store them. There was a commercially available type of oven ideal for this sort of thing, but the money wasn't going to run to that, so I had to devise something. My father and I put it together but I had to cart it all the way from Aberdeen on a train, down to Southampton and to the ship! So there wasn't very much money available for equipment. As far as food was concerned, yes everything was provided. There was a very generous allowance once you were on base of beverages and cigarettes, if you happened to be a cigarette smoker, for which you paid nothing!

[Part 1 0:40:30] Lee: What did you make of Port Stanley and the Falklands when you got there, do you have any abiding memories of the Falklands in the mid-60s?

Lewis-Smith: I found the Falkland Islands an absolutely fascinating little colony, as it was then. It was almost a home from home. It was so like parts of North West Scotland or the Orkneys or Shetlands in appearance and topography and climate, and the people were so Scottish, most of

them, or else they came from Scottish ancestors who had moved out there, so I felt very much at home there. And most of the houses were sort of small cottages, often prefabricated, no not prefabricated, but with cast iron roofs and sometimes even walls!

[Part 1 0:41:28] Lee: Would that be corrugated iron?

Lewis-Smith: Yes, what did I say?

[Part 1 0:41:31] Lee: Yes, corrugated iron, that's fine!

Lewis-Smith: Corrugated iron, and all painted in bright colours, it was just a very fascinating place, everybody was so friendly and it was such a small town, and the shops, the few that there were, were well just little stores really. And the pubs, all four of them, were spit and sawdust places really, and if you went on a pub crawl, depending how long you stayed in each pub, you could be round the lot of them in about half an hour, and still be sober!

[Part 1 0:42:17] Lee: Scottish music to be heard?

Lewis-Smith: Yes, yes there was in those days, but I don't think it happens so much now. Dances were held in the town hall on a very regular basis, probably twice a week. I attended quite a number of them, and there was always a live band. The emphasis was always on Scottish dances and Scottish-type music, which again made me feel very much at home!

[Part 1 0:42:45] Lee: But again it wasn't all play, there was work to be done, the ship was in and there was cargo to reassemble or to arrange.

Lewis-Smith: Yes there was huge amount of just that. In Stanley the ship tied up alongside the jetty, the main jetty, and yes there was a lot of rearranging of hold cargo. We had to divide it up into the various Bases that the ship was going to go to, so that everything for one Base was in the one place, and so on. And there was also quite a lot of stuff to come off because we took a lot for the BAS office staff in Stanley. I don't remember how many staff there were, but there must have been probably six or eight, maybe even more. They had housing and so on provided for them and there were forever modifications being done to these properties, so a lot of building material was taken on the ship as well. So we helped with getting this stuff off the ship and to the actual sites. I remember helping to almost build a house for one of the members of staff down there! And at the same time, there were a whole lot of building materials to be taken on board the ship, which had already been gathered, in the form of shingle or hard core, and sand in little hessian sacks. This had all been gathered together at the end of the jetty, stockpiled there in the previous months. So all this had to be manhandled on to a tractor trailer and then along to the end of the jetty, at the ship end of it, and then hoisted into the hold. So a lot of really quite heavy manual labour had to be done. It was a good introduction to what we would be expected to do once we got farther south!

[Part 1 0:44:41] Lee: Sounds like specialist type of work though isn't it, where you need training before you went and did it? Were there some close shaves?

Lewis-Smith: I don't think anything that we have spoken about so far was very specialist, it was just that whatever your profession you all mucked in and did all this sort of cargo work. That was part of the joy of the whole job really! But risks and things, yes, I can recall various near misses of accidents happening in the hold or up on deck, when things were being hoisted either out of the hold and on to the jetty or vice versa! And I don't even remember anyone wearing hard helmets you know. I remember a hawser that had umpteen sheets of plywood or chipboard, they were

what, 8 feet by 4 feet, and maybe a dozen of these being lifted up out of the hold, and the hawser snapped and all these boards came down like leaves from a tree. Really, they just scattered all over the place! How nobody was hit I really don't know - it was an absolute miracle, but it didn't cause any injuries at all!

[Part 1 0:46:20] Lee: Tell me about the windproof trousers that were slightly too large!

Lewis-Smith: Oh! [Laughter!]

[Part 1 0:46:28] Lee: I use that in a slightly jokey way!

Lewis-Smith: Oh, right! We didn't get our clothing issued in UK, as the system is nowadays. It was issued in Stanley, from a warehouse at the end of the jetty. All our dimensions and statistics had been taken before we went south, so they had a list of details about how big you were in every part of the body! One of the items we were all issued with was windproof trousers which were great things, even though they were made out of the same material that the tents were! But at least they kept the wind out. We were each issued with two pairs of these, but I think they'd run out by the time they got to me as there was only 1 pair my size left - but I was told there was another pair which might be a bit large – and suggested I might be able to modify them in some way to suit my size! And lo and behold this was a pair of trousers that had actually been issued to the Trans-Antarctic Expedition, and still had the label attached to them. This was 10 years, well nearly 10 years, after TAE but they'd never been unwrapped and they had this immense waistline! At that time I had quite a reasonable waistline of 32 inches, and they gave me this pair of trousers with a 54 inch waist! Not only that, I have got a fairly long leg, about 32 inches, something like that, but I think these trousers were 38 inches. I don't know who on TAE had dimensions like that, but - probably because there wasn't anybody - these trousers still existed, and I ended up with them! I've still got them, still got the labels on them in fact, and kept them as a sort of souvenir of bygone days!

[Part 1 0:48:27] Lee: Did you have to wear them in anger!?

Lewis-Smith: No I didn't wear them, I never unfolded them they were too precious, I thought - a really good souvenir here. I may even put them on e-Bay one of these days!

[Part 1 0:48:39] Lee: When you finally, well first of all you were assigned to Signy, that was where you wanted to go wasn't it, I guess that was your dream ticket?

Lewis-Smith: It's where that particular job was. Signy was the biological Base. At that time there was no biology done elsewhere. And Signy was an absolute paradise from a biological point of view, it had everything going for it, it was small and compact, had all the sort of geological and glaciological features you can think of, it was like a miniature Antarctica really. It was a most wonderful place!

[Part 1 0:49:17] Lee: But when you got there, you were thwarted!?

Lewis-Smith: Ha yes! Well, I was thwarted because I got to Signy in early November and the ground was still covered with snow, everywhere! And if you're a botanist who is working on very tiny plants which only grow a few inches high at most, snow was your worst enemy, so there was not really anything I could do. I unloaded all my stuff while the ship was in for 2 or 3 days, and I decided 'Well there's nothing I can do here', and I'd heard conditions farther south had been a lot milder and the thaw had set in! I asked if maybe I could accompany the ship down to Marguerite Bay, they were going straight down to do Stonington, Stonington and Adelaide, discharge their

cargo and then whiz back up again to Signy! I was given permission to do that and, for the next week no, no ten days or a fortnight, I went off down the Peninsula and got an introduction to the vegetation down there, before I even saw it on Signy!

[Part 1 0:50:36] Lee: So this decision to go farther down the Peninsula, was that your request being agreed to by BAS HQ or was it their initiative?

Lewis-Smith: No, it was my initiative, but I sent a quick telex to.... to BAS Headquarters in London and the response was 'Yes'! I guess if I stayed on Signy I would have potted about helping with other things, but it wouldn't have progressed my work at all!

[Part 1 0:51:10] Lee: What did you achieve whilst you were away from Signy, before you came back on a more permanent basis?

Lewis-Smith: Well, I was introduced...., I introduced myself to the vegetation in the Peninsula region, which is very similar to Signy. I developed an understanding of how communities were constructed and of the species that were involved. Then what happened after that was that I came back to Signy. But at that time there was something else that I was due to do. Since originally I was supposed to be at Signy for the first 2 weeks, I was then to go to a place called Michelsen Island and Powell Island, which was the third largest of the South Orkneys, and make a botanical survey of that island, and also carry out a fur seal census - which I'll mention in a moment. That was a camping trip which was scheduled to be for a couple of weeks. I was accompanied by Keith Holmes geologist, Tony Bushell field assistant and Mike Cousins another field assistant, and so the four of us went directly there, and that in itself was a memorable experience! As well as the botanical work, the fur seals were particularly interesting because only a year or two earlier it had been discovered that there was a small breeding colony of fur seals here. Now this was of importance because fur seals had been almost exterminated back in the 1800s, and had really never been reported again till now! We are talking about the early 60s and here they were beginning to re-establish again, so one of the things I had to do was to make a census of any seal pups that had been born, so I duly did that as well. But in order to get around the island to visit some of the ice free areas and have a look at the vegetation and for Keith to look at the geology, we had some pretty hairy trips across the island over the ice piedmont. It was heavily crevassed and some of the ice slopes were really quite precipitous, which for me was an entirely new experience. I hadn't done anything of this sort before, and this is where the lack of health and safety and field travel training really began to show! At least the field assistants who we had with us were experienced in this sort of thing and were a godsend! But to imagine that sort of situation happening today would just be risible really, the things we did and the places we went to!

[Part 1 0:54:15] Lee: Can you give an example?

Lewis-Smith: Well, to get to anywhere we'd to cross this ice piedmont, a sort of ice plateau, a horizontal glacier if you like, and at first there'd been a lot of snow when we first arrived there, so for a lot of the ground you couldn't really make out anything, see any features. And it was only after the first week, when a big thaw had set in, that we realised that the terrain we had been crossing, without being roped up because it looked so safe, was seriously dangerous. All of a sudden there were huge crevasses all over the place that we had been walking over without ever knowing they were there. These crevasses were anything up to about five metres across and maybe ten metres deep, with rushing water at the bottom of them! This was when we decided it would be wiser to be roped up when we went anywhere! [Laughter!] And then getting up to some of the peaks involved going up some really steep ice slopes, and once you were up on a ridge it was like walking along a sort of knife edge in some instances! One of these was literally about one foot wide and dropped off steeply about 500 feet on either side, and as I said I'd never done

anything like this before. I admit I had some quite worrying moments, but we got through it all and it was absolutely marvellous!

[Part 1 0:55:53] Lee: Tell me about the Base itself, because it quite busy wasn't it.... Signy, it wasn't just a three-man Base by this time, there were more men there, particularly in the summer.

Lewis-Smith: It had been more than a three man Base for quite a long time, it was just the first couple of years really when it was a very tiny Base. A new accommodation and laboratory building had just been completed the previous year. It was a prefabricated fibreglass, two storey building, completely novel, nothing like it in the Antarctic. It was designed on the basis of a British Railways signal box or something similar!

[Part 1 0:56:31] Lee: Oh really!?

Lewis-Smith: Yes! [Laughter!] Somebody got the idea, Derek Gipps I think it was, in BAS headquarters, from a building built of prefabricated fibreglass panels. He thought there might be something in this as a model for an Antarctic Base hut, and that's what we ended up with! In those days it was a really fine building and we thought it was terrific, but by modern standards it was just a heap of rubbish! [Laughter!] But it was great, pretty primitive, and we had, I think in the summer, we had 22 people on Base, whittling down to a dozen for the winter which is a really nice number to be with. Everybody just got on with their own job. Frequently everybody would be called together to do some particular job that required lots of bodies and, of course, there were the domestic duties that were done every Saturday morning, to great merriment and the playing of scrappy old records, and so on!

[Part 1 0:58:01] Lee: Scottish records?

Lewis-Smith: Yes, yes I took some very Scottish type things down to Base, including my kilt, and I think they were treated with a lot of scorn and hilarity [Laughter!] by other members! But that happened thanks to that young Inigo Everson, he was forever putting on these records during the Saturday scrub-out on Base and turning up the volume to maximum! And it made people work faster you see, so they could get out of the building as quickly as possible! Eventually many [of the records] were sabotaged when someone left them on a hot radiator overnight, and they warped!

[Part 1 0:58:40] Lee: I think there were 18 of you at H, is that right, on the Base?

Lewis-Smith: I really can't remember. As I said there were 12 in the winter and I thought maybe nearer 20, maybe it was 18, in summer.

[Part 1 0:58:55] Lee: OK, no, alright, that's fine. Did you all get on or were there any social difficulties at all?

Lewis-Smith: This was something that impressed me tremendously, and has done in subsequent years on Bases, most Bases anyway - just how everybody did get on.

[Part 1 0:59:14] Lee: Can you account for that, because you are throwing together 20 odd people from different backgrounds?

Lewis-Smith: Well, I guess everybody had a common interest in going to the Antarctic - to pursue their profession in the Antarctic. What impressed me most of all was the way that....., there was a conference in Cambridge before everybody went south. We all got together, and

there were lectures given on all the different aspects of living on Base. Some lectures were on scientific topics, and it was explained to us just how important it was that everybody got on well together, and so on and so forth. Everybody had a medical examination, as obviously you had to be fit. Going back to the original interview for selection for the job it was interesting to see how probing the interviewer was - in my case it was Bill Sloman, but Eric Salmon was another member of the personnel staff. Without going into great detail or prying into your private life and affairs, just by asking certain questions and getting certain answers, they could find out a tremendous amount about you! I was very impressed by that approach in interviewing, because in other countries when they interviewed applicants, and I'm thinking particularly of the Americans, they were put through psychological tests. The Australians did it as well!

[Part 1 1:00:18] [?]

[*Re the US and Oz evaluation*] All sorts of really in-depth questioning and your entire personal background was investigated. But BAS didn't use that approach and it worked remarkably well. Well I thought so! And when you asked 'Did we all get on well together?', yes, I don't recall anybody ever falling out amongst the FIDS. Although there was an incident, in my first summer at Signy, when we had a team of four builders that was brought in to erect a fuel tank, the oil tank that was at Signy for a long time. I don't know how they were selected in the first place, but they were a pretty motley group and one of them [REDACTED]. I hope you're not going to interview him! [Laughter!]. But he, if he had a drink or two, his entire attitude to life, and people in general, just changed instantly. There was another guy who was from [REDACTED] I think, he was a big burly fellow, and these two characters were forever falling out with each other! This little [REDACTED], the more irate he got the less coherent he became, and nobody could understand him except myself, so he sort of befriended me and I took him under my wing on occasions. [REDACTED]

[Part 1 1:03:29] Lee: But that was the exception was it?

Lewis-Smith: Yes, although it's interesting that many, many years later at Rothera when there was a building team there, the only friction that I encountered was between builders, and again at an Australian base where they had a major building programme going on, it was the builders who caused all the problems there. Very strange!

[Part 1 1:03:59] Lee: Let's take a break and we'll come back and talk about biology if we may.

Lewis-Smith: Very good, alright!

Ron Lewis-Smith Part 2:

[Part 2 0:00:00] Lee: This is Ron Lewis-Smith recorded by Chris Eldon Lee on the 10th of April, 2011. **Ron Lewis-Smith, Part 2.**

Let's talk a bit then about the biological work that you did particularly on Signy. In those days research was very much a one man band wasn't it?

Lewis-Smith: Yes it did tend to be that, although perhaps more so, particularly, in my field of work. If you were a marine biologist then you were in charge of your own programme but reliant

on other people to help you with the boat operations to get you to where you were going, keep an eye on you if you were diving, or something like that, so you had others involved with you. Similarly geologists in the field usually worked with two or three others. Myself as a terrestrial biologist didn't demand other people to be with me, although nowadays it's not quite the same because, for health and safety reasons, you usually have a field assistant accompanying you. While it's very handy to have somebody with you to help with your work, in those days in the 1960s, we just didn't have that facility.

[Part 2 0:01:27] Lee: Just digressing forward for a little bit for a moment, when you did start working in a team later in your career, how did you adapt to that? I'm thinking perhaps of the Fellfield Ecosystem Research Programme. You were no longer your own boss were you? Was that alright or is that just as congenial? [*There were also the Signy Island Research Sites Programme, South Georgia Research Sites Programme and Alexander Island Terrestrial Ecosystem Programme*]

Lewis-Smith: Well, in as much as I was running the programme jointly with Bill Block, I was in control of it. And yes we were working as a team. There were several of us involved and we each contributed to different aspects of the programme. The Fellfield Programme was at several specific sites and we would go into the field as a group and sort of dissipate once we got there to doing our own thing!

[Part 2 0:02:12] Lee: So you were a group of individuals as opposed to a team were you?

Lewis-Smith: Yes, up to a point, there were certain things where two or three of us might be working together, either setting up instruments or doing some sampling or electronic recording or even manual recording, it just depended on the type of work you were doing on that particular day.

[Part 2 0:02:38] Lee: Let's go back to your first footings on Signy in the 60s as a biologist, what first of all were you told to do, or did you decide yourself what to do?

Lewis-Smith: Well before going south, I had to draw up a programme, an outline of what it all was going to entail, and my supervisor was Dr. Charles Gimingham, later Professor, in the Botany Department at Aberdeen. He and I drew up an outline for how I was going to carry out my research on Signy. It was helped to a great extent by him actually coming down during my second summer to Signy and spending some time with me.

[Part 2 0:03:27] Lee: Why was that helpful?

Lewis-Smith: Well he was my mentor and supervisor, and to have him actually directing me in situ and offering suggestions as to how I might do something a little bit differently to what I was perhaps doing was a great advantage. We worked together setting up some experiments and, as a result of which, we wrote two or three papers - publications - together, but that was more physiological studies than ecological, and that was very helpful.

[Part 2 0:04:09] Lee: So you went down there to start work in '65 would it be?

Lewis-Smith: '64, [Lee: Yes '64] '64, yes!

[Part 2 0:04:13] Lee: Was the programme of work you were doing, was it predominantly his idea or predominantly your idea?

Lewis-Smith: Well, at the original interview that I had, I had applied for a job that required somebody to work on the cryptogamic plant communities at Signy Island, about which nothing was known, and devise a classification of communities that could be extended to virtually the entire Antarctic. At that time nothing was known about plant communities in the Antarctic! So that was the remit, and then I was told to go away and think about how I might draw up a research programme. That's when discussions with Charles Gimingham produced an outline programme, and I ended up with several pages of what it was all going to entail, and what I hoped to achieve over the period of time that I was south. Martin Holgate was very encouraging also. In fact, he said 'Your main programme will be on Signy Island, but the vegetation is somewhat similar throughout what we refer to as the Maritime Antarctic, in other words the Antarctic Peninsula region and the offshore islands. If you get the opportunity to go on the ship to the Peninsula try and visit as many sites as possible and find out about the vegetation there! Then it can all be put together in a comparative publication.'

[Part 2 0:05:06] Lee: So tell me about your work process, your kind of scientific routine in those early days. What were you doing, just going out digging up plants? What were you doing?

Lewis-Smith: No. Initially I had to discover where the vegetation was. This was one of the aspects that I really enjoyed because I had to tramp around the island, although I can't say that was part of the job! It was necessary to actually get a feel for what the vegetation was like, and what the different species were, and the nature of their habitat, so I did quite a lot of walking in the first few days I was there, covering as much of the island as possible. To appreciate what constitutes a community, and a community, basically, is a certain grouping of species which occurs consistently in a certain type of habitat for one reason or another. I'd already got a good feel for this, having analysed all these chunks of Signy that Martin Holgate had presented me with! And so here I was now on the island and I was able to relate what I had found in these samples to what I now observed in the field. Then, having assessed the overall picture and distinguished roughly, oh I don't know, about 20 or so distinct communities each related to a suite of environmental criteria, I then went out and analysed the species composition of countless sites using the fundamental method with a quadrat, a small square, basically just a square!

[Part 2 0:07:51] Lee: To draw on the ground or?

Lewis-Smith: No, not draw, it was actually.....

[Part 2 0:07:55:] Lee: A wooden spoon!?

Lewis-Smith: Again no. It was a small square made of aluminium bars. You placed it randomly on the ground within an area of vegetation that looked pretty homogenous, i.e. a community, and recorded all the different species and their percentage abundance. I analysed 20 of these per site – community, then went on to another site. Over the period of about two and a half years I had analysed several hundred of these sites, each with 20 sets of data, together with soil samples for physical and chemical analysis, and then the detailed analyses came when I got back home! Finally, this led to developing a classification of Signy's plant communities, and eventually for the Peninsula also.

[Part 2 0:08:33] Lee: Were there ever any surprises or did everything pan out as you had anticipated?

Lewis-Smith: I think from what I'd read and been told, and had already seen before I went to Signy, I think things panned out more or less as I'd have expected! But now I was getting down to the nitty-gritty and the real detail, and really everything came as a bit of a surprise. One of the

significant things, from an ecological point of view, on Signy, is that there is such a complex array of geology, and geology creates soil. The geology varies from really quite acidic schist rock to a form of marble, which is highly calcareous. So the range of soils from strongly acidic to really calcareous types support totally different, and in some cases unique, types of plant communities. It's probably true to say that there is no such diversity of soils and rock types in such a small area anywhere else in the Antarctic! From a plant ecologist's point of view Signy was an absolutely fascinating place to study community dynamics!

[Part 2 0:10:03] Lee: Did you ask yourself bigger questions, such as how did these plants get here?

Lewis-Smith: Well that sort of question came into the later scenario. I became very interested in the process of colonization, which of course takes into account how species get there, whether it is just local dispersal or, in a few instances, from afar. Because I had this long association with Signy and its flora and vegetation, I knew it like the back of my hand and, as time went by I could associate floristic changes with the effect of climate warming. As the ice margins and the glaciers receded and new surfaces became available for colonization I got quite excited about what new species were appearing, and how communities actually initiated and developed into what I'd been studying - the mature communities. I could now observe them developing from scratch, and it was during the course of these observations, and I'm talking about, oh 10 or 15 years after I first started at Signy, I found species that had never been recorded before, and I think I had a pretty good handle on what did occur on Signy! In the early 1990s I came across two or three species that I absolutely knew were new to the region. I presumed they arrived as spores from Tierra del Fuego, as they were known to be native there, on the prevailing westerly winds, as field spore-trapping experiments later proved. They were becoming established on areas of ground that had, when I started at Signy, didn't exist because they were covered by ice and now were free of ice.

[Part 2 0:12:08] Lee: So were you, towards the end of your time as a biologist, were you beginning to see more sophisticated plants moving into Signy or was it that the more highly evolved plants never got there!?

Lewis-Smith: No, it's true to say that nothing new has been recorded in the higher plants. We refer to flowering plants as higher plants, and the cryptogams – mosses, lichens and algae - as lower plants. There are only two native flowering plants in the Antarctic - one is a grass and the other is a small plant that is related to chrysanthemums, but doesn't look anything like them!

[Part 2 0:12:58] Lee: So the, by the time you left the British Antarctic Survey the vegetation on Signy had reached its ceiling had it, its plant ceiling?

Lewis-Smith: I'm going to have to stop you there, because I made bad blunder!

[Part 2 0:13:09] Lee: Go on.

Lewis-Smith: There are only two native flowering plants in the Antarctic, one them is a grass and the other one is a very low lying compact species which is related to the carnation! Both are fairly widespread throughout the Maritime Antarctic, the western side of the Antarctic Peninsula, right down into Marguerite Bay and northern Alexander Island, but no other species have colonised, as newcomers! I'm perhaps jumping the gun a bit here, but there is a very weedy species of grass which is widespread as an introduced species on South Georgia and which has become established around the Polish station on King George Island. But that is not a natural phenomenon, it's been accidentally introduced by humans!

[Part 2 0:14:14] Lee: Oh OK. You spent some time at Signy and you were expecting to spend the winter there, and looking forward to it, and then the telegram arrived!

Lewis-Smith: Ah yes, that's right! I was expecting to spend two winters, the full two and half years there, but as my first summer was drawing to a close, at the end of the first summer I received a telegram from Charles Gimingham, via Martin Holgate. He suggested that it would be better for the development of my programme and the analysis of my data, if I came back at the end of the summer, write up my work so far at Aberdeen University, and then go back down at the beginning of the following season. This would also allow me to check the identity of the specimens that I had been collecting whenever I came across something I was unsure about, so that I would know accurately what species comprised all those communities I had been analysing. So I went down for the next 18 months or so, and I spent the winter the second time around!

[Part 2 0:15:16] Lee: So coming back to the UK for that first Antarctic winter was partly to make sure you were on the right track, was it a kind of a supervisory opportunity?

Lewis-Smith: Yes, and there was a lot of sense in that, because for anyone going down fresh from university on a two year programme, two winters, three summers, if you weren't going along the right track there was a fair chance that you weren't going to know too much about that until you got home! Communications in those days were very poor and we were very limited in the number of words you could send in a message back home! So if you had problems with your work then the exchange of messages could be quite protracted. I mean it's so totally different nowadays with e-mail and phone calls, when problems can be sorted out in a flash!

[Part 2 0:16:16] Lee: You finally get to spend a winter on Signy in 1966, and I wonder what are your memories of that winter, what was it like for you?

Lewis-Smith: Well, it was probably the most memorable six months, I suppose, of my life. It was just a wonderful experience. Firstly the field work I was doing came to a halt - clearly the ground was well and truly covered by snow, so there was nothing I could do in those conditions, well in the field work respect. But I gathered together lots of samples which I kept in the laboratory or outside the laboratory, in a frozen state, but they were easily accessible, and I did a whole range of physiological experiments in the lab using this material. I also did a lot of plant chemistry analyses, which was really something I'd no experience of, but we had text books on Base that provided details of how to undertake these analyses. We had the chemicals on base from a previous soil chemistry programme that somebody had done. So I trained myself in the techniques with the object of seeing how certain elements varied between summer and winter in a range of moss species. The physiological study investigated the rate of water uptake and loss - water relations as it's called - in a wide range of moss species with different growth forms - under specific microclimate conditions. This has a major controlling influence in their photosynthetic activity. So there was plenty to occupy me as far as my research was concerned.

[Part 2 0:18:06] Lee: So was that pure science, purely for its own sake, or was there a more broad application for that later on?

Lewis-Smith: Well, if you remember that an awful lot of what we were doing in those days was pioneer work, nothing like it had been done in the Antarctic before, so it would be construed as fairly basic fundamental research if you were, say, working back here. But, doing it in the Antarctic for the first time was novel and it led to future programmes, more sophisticated ones. As time went by more money was available and you were able to select researchers with greater expertise to do these more detailed programmes. I like to think of my work in terms of laying the foundation for future research, at least in plant biology.

[Part 2 0:18:58] Lee: When you went back to Britain to pit stop with your supervisor Gimingham, did you, when you went back to Signy again for the second occasion, had you changed your tactics at all? Did you have to make any adjustments to the way you were doing things, or had you been ploughing the right furrow?

Lewis-Smith: No, no, I was surprised really, and have to admit rather immodestly, that I was highly commended for the report that I wrote on what I had achieved and analysed during my first summer! So what I did for the next 18 months followed along the same lines, diversifying a bit here and there. That's the problem with being a plant ecologist, you tend to diversify very readily as you have to have an understanding of the environmental intricacies including geology, pedology [*soils*], glaciology, hydrology, meteorology, and so on!

[Part 2 0:19:48] Lee: The severe winter of '66 gave you not only laboratory opportunities but also travel opportunities, I would imagine, as well?

Lewis-Smith: Yes that was another great feature of that particular winter, it was a very severe one! It started extremely early and it went on virtually, as far as the sea ice was concerned, up to about Christmas Day I think it was! And yes it gave us great opportunities for travelling around the island and over to Coronation Island, which was a great experience - crossing the sea ice for about five miles or so! And then doing some mountain climbing on Coronation, great fun!

[Part 2 0:20:26] Lee: You devised a technique on Coronation Island for skiing uphill!?

Lewis-Smith: Oh yes! [Laughter!] I didn't actually use it for going uphill on Coronation, because the surfaces and the terrain were so unknown and crevassed. It involved a small parachute and I used it a lot on Signy. Para-skiing was very much in its infancy in those days but I had already tried it out on the ski slopes of Glen Shee [*in the Cairngorms*] while I was at university. Quite a number of people were doing this and they became a bit of a menace on the main runs! To operate and steer the small parachute you held the cords in two bundles and, assuming the wind was roughly in the right direction, it would pull you up the slopes at quite a speed! In those days there were very few ski lifts of course. The novelty of para-skiing was very exhilarating! Then you'd bundle it all up into satchel and ski back down again. The trouble was that as more people used them on the ski slopes people were hurtling downhill as others were billowing up the hill, and not seeing where they were going! But yes, I took mine to Signy. Incidentally, the parachute I bought, I think it was in Millets, and all of my family had them, cost only £5 each! Many, many more years later at South Georgia, I was working with a Swedish colleague who brought one there to use just for recreational purposes, and I think he paid about £1700 for his parachute! But that's beside the point. I used my parachute and my skis to whiz around all over Signy, and around the island on the sea ice, and across the sea ice to Coronation, but I didn't use it on the mountains. However, on one trip I did take my skis to the summit of Wave Peak, over 3000 feet high, and skied all the way to the sea ice while the rest of the group had to walk down!

[Part 2 0:22:41] Lee: Did the sea ice let you down at all?

Lewis-Smith: Well, literally, yes! On one occasion when the sea ice was fantastic, you could reliably travel for miles in most directions and very safely, but there was one very foolish thing I did, probably the most foolish thing I've ever done! Apart from nearly falling down crevasses because I didn't have a rope. I was staying on my own in a field hut on the west side of Signy, a very cosy little hut at Foca Cove. I was recording snow depth at various sites to see if there was a relationship between snow accumulation and the plant community beneath, in the middle of winter when all the ground was covered in snow. However, certain species grow in situations

which are mostly blown free of snow. While I was there I thought the sea ice looked stable enough for walking on and that I could ski across to a group of rocky islands called Jebesen Rocks. These were about a half or three quarters of kilometre offshore. Terribly foolish thing to do since nobody knew I was doing this! And off I went. I got so far, maybe about half way, when I noticed that the ice was beginning to wobble a lot! And then it became kind of slushy and a bit porridge-like and my skis began disappearing under this, at which point I realised just how foolish I had been. I realised that at this point there was obviously a current between the islands and the mainland that was keeping the ice fairly loose, so before I sank too far I got back on to the stable ice, and hightailed it back to the field hut, thinking what an idiot I had been! [Laughter!]

[Part 2 0:24:55] Lee: When you were being mentored by Gimingham, [Lewis-Smith: Gimingham, yeah!] Gimingham, did that at all shape the way you mentored your students later on; did you use him as an example?

Lewis-Smith: I suppose in a sense it did. Charles Gimingham was a very amiable person, he had a way with students that I'd don't think I came across with any of my other lecturers. He was very, very patient, he always showed an interest in what you were doing no matter how inappropriate it might have been, and he always had time for you to discuss something or explain it clearly. And I think I've tried to follow that principle in anything I have done with my students. Once I'd appointed somebody and once we had got the programme thrashed out as to what he would be doing, I liked to leave that person more or less to develop it as he went along, and we would sort out any problems or conceive new ideas in discussions, or he could call on me for advice, for whatever I might be able to do to help. Quite often I was working with that person in the field and that was fine, but if I wasn't I liked the person to get on with it using his initiative. I hope people in future years looking back on that don't feel that I was abandoning them! But I liked them to develop and apply their own initiative and expertise in carrying out their research programme.

[Part 2 0:26:33] Lee: Did you enjoy that role of being a mentor?

Lewis-Smith: Oh yes, very much so, very much so, yes! I had one or two failures in as much as they didn't achieve all that they were supposed to in the field, and when they came back they lost interest in writing up their work for publication. In these instances I had to virtually write the papers for them from their field notes and discussions. It then went out as a joint paper. I think everyone has a few disappointments with field staff who don't come up to scratch.

[Part 2 0:27:24] Lee: Your third summer south, you had a lot more free rein to go and visit and investigate other Bases, other islands?

Lewis-Smith: I did.

[Part 2 0:27:34] Lee: Was that again to compare the plant ecology of other Bases or localities to compare with Signy?

Lewis-Smith: Yes it was, it was actually written into my programme that, at the end of my third season on the way out, I should go south along the Peninsula yet again, but this time at the end of a season when there was the least snow and ice about. That proved very valuable for my ecological overview of the region, as well as being of terrific scenic interest going down the Peninsula! As you know yourself it is a very beautiful area. I visited many sites that I hadn't been to before and, on that occasion, it was interesting because we had Sir Vivian Fuchs on board. He wanted to call in at some of the old abandoned BAS Bases, FIDS Bases, and this gave me the opportunity of visiting them. This was really when my interest in the historical aspects of BAS and earlier times developed. So I accompanied Sir Vivian ashore at these Bases. He was keen to

see what condition they were in, whether the generators were still capable of turning over, and so on! And then after the Peninsula trip, the ‘cruise’ as I call it, I went to South Georgia, after going to Stanley to collect someone and return him to SG. So, myself and Inigo and another marine biologist, Bob Ralph, were able to spend about ten days at South Georgia, right at the end of the season. Although I’d visited South Georgia briefly previously, this gave me some time to actually get a feel for the environment and the vegetation and plant communities there, which stood me in good stead for the future!

[Part 2 0:29:47] Lee: Were there vast differences or was there a very much uniform colonization along the Antarctic Peninsula? When you went to the other Bases, were you finding big difference or very much of a muchness?

Lewis-Smith: Pretty much the same but far less diversity, far less diversity of species and of communities than at Signy.

[Part 2 0:30:08] Lee: The farther south you went?

Lewis-Smith: The farther south you went. It was pretty much the same throughout the west side of the Peninsula. Everything that I found on the Peninsula was represented on Signy, but a lot of what occurred on Signy wasn’t represented anywhere else. There were exceptions to that, but they came to light many years later. In future years when I managed to visit some more remote locations such as James Ross Island and Alexander Island, at the two extremities of the Peninsula, I found there were some quite significant differences in the vegetation. Deception Island is another very interesting location because there is geothermal activity there and some fascinating and unique species and communities associated with steaming fumaroles.

[Part 2 0:30:59] Lee: You had quite an eventful trip home didn’t you on the, at the end of your third summer, via Montevideo, and then there was a food shortage!?

Lewis-Smith: Oh well yes, yes! I was going to say before you got on to the food bit, that any visit to Montevideo was interesting!!

[Part 2 0:31:17] Lee: Did you avail yourself of the facilities I wonder!?

Lewis-Smith: Not sure what you mean by that! There was a meat market with cafes near the docks in Montevideo, and you could have the most fantastic steaks for next to nothing! That was the real treat of Montevideo!

[Part 2 0:31:38] Lee: So were you buying steaks to take on the ship to take back to England?

Lewis-Smith: No, the food crisis as far as I can remember, was at the end of my first summer. There’d been a problem with the doctor at South Georgia who had to go up to Stanley, for an operation or something like that. The outgoing ship from Signy, this time the ‘John Biscoe’, was diverted to Stanley to take this doctor or a replacement back to South Georgia. Whaling had just [*permanently*] ceased that season but there was still the Falkland Islands Government settlement at King Edward Point. We returned the doctor to SG, but it had been announced in Stanley that we would then be going directly from South Georgia to Southampton! We were informed in Stanley that, by adding an extra week to the voyage home, there would be a fair chance we might run short of food - which didn’t go down too well! We were advised to stock up personally on whatever we could obtain in Stanley, and so we were buying up cases of baked beans and tinned sausages and stuff like that! If we had been suitably forewarned we could probably have snatched some stuff from the Base, but anyway we stocked up with these little goodies, and towards the

end of our voyage we were actually having to consume them! I can't imagine that kind of situation happening these days! [Laughter!]

[Part 2 0:33:24] Lee: You were out of a job when you got back really!?

Lewis-Smith: Well I....., [Lee: In 1969!] Not at first. I came back in '67 and worked on my PhD which was duly completed in 1968, and then, yes, I was looking for a job, because my contract with BAS was about to terminate. So, in 1968 I started applying for jobs, all sorts of rather way-out types of jobs. I seem to recall being interviewed for one in Hong Kong, and another in Alice Springs; there was something somewhere else, and one in the Northwest of Scotland, which was probably the most appealing one! However, the day before I went to London for one of these interviews, I got a phone call saying 'Could I look in at BAS Office in Gillingham Street as we have something to discuss with you!' And so that was fine, I was in London anyway and went along for this chat, and I was informed that BAS was soon to start up a Base at South Georgia now that whaling has ceased. They would be taking over the Falkland Islands Government settlement on King Edward Point, and there would be a science programme starting. They were very keen for a botanical programme to be initiated, and would I consider leading this project? Again, can you imagine that happening these days - somebody just coming along and offering you a dream job like that!?

[Part 2 0:35:00] Lee: Very, very politically incorrect isn't it!?

Lewis-Smith: Yes! Well, agreeing to this offer seemed like a good idea at the time, I thought, as nothing else was falling into place, so I said 'Yes', and that's how my involvement with South Georgia began! The job involved spending two full summers from 1969 to 1971 at SG, that's about seven months or so each, with a northern summer in between - when I got married!

[Part 2 0:35:31] Lee: And were you having to repeat the science again in a new location, or was there additional science?

Lewis-Smith: The main project was a completely new type of programme. It was part of an international programme, as it happened, called the International Biological Programme. The aim was to assess the effect of regional climate on the amount of growth or biomass that a set of internationally approved 'test' plants were capable of producing at different times throughout two growing seasons. These plants, grown from seeds, included a variety of pea and radish, grown in a standard medium in pots, treated with a standard fertiliser every few days, and set up at several field sites representative of dominant native plant communities. So the experiments used these plants to monitor what's known as primary productivity in relation to climatic and environmental conditions at selected sites around the world. A component of this was the IBP Bipolar Project, and South Georgia was chosen as one of two Southern Hemisphere locations. [*The other was Macquarie Island*] I also had non-BAS colleagues working in Greenland. It was the South Georgia bit that I was involved in. That was the basis of that programme and there were just three of us working on it, the others being David Walton and Clive Stephenson, so the three of us worked on that. But in addition to the main programme each of us had our own individual project investigating in detail one of the predominant plant species in the island's vegetation. My pet species was tussock grass, but I extended my plant ecology and community studies that had begun on Signy, to South Georgia. Only it was much more complex because there are many higher plants involved.

[Part 2 0:37:17] Lee: You were with BAS for a very long time weren't you, you got promoted in '75 to become Head of the Plant Biology Section?

Lewis-Smith: That's right yes, I was actually very fortunate in being appointed to the permanent staff, I think it was in 1972, and that was quite unusual so early in one's career. But it was something that was feasible in those days, but certainly wasn't about ten years later when it was almost impossible to just get on to the permanent staff so quickly!

[Part 2 0:37:52] Lee: How was it for you moving up the ladder, into - for want of a better phrase - management, did you, were you being withdrawn from the coalface and spending more time in the office!?

Lewis-Smith: Yes, yes but when talking about management I was very much middle management. I wasn't senior management! Middle management suited me at the time but in the future I didn't really think I was cut out for senior management work. It would have prevented me working in the field or conducting lab experiments! Too much bureaucracy!

[Part 2 0:38:28] Lee: So how did you balance, once you became Head of Plant Biology, how did you balance office and field work?

Lewis-Smith: Very easily really! Of course, by then I was married and Elinor and I had a young family, so clearly going south posed new problems that I never had before, but balancing the two, wasn't really a problem. You sat behind a desk a lot of the time, but part of that time you were just analysing and writing up your data for publication. Some of the time you were working with your staff who had their own projects. At various times I had staff involved in projects at Signy, some were working at South Georgia, and latterly at Rothera. Occasionally I had someone working elsewhere, in the South Shetlands or Peninsula, so the research was diversifying, but there was no problem in balancing it up as it was all interrelated. And then there was an increasing number of collaborations with UK and foreign universities and institutes. I can't think of any problems there either. Of course, I was involved more in managerial meetings, and the overall project planning and costing of the terrestrial biology unit at BAS and how it fitted into the wider remit of BAS in general. I suppose my participation in staff meetings and higher level discussions was bordering on senior management from a fairly early stage.

[Part 2 0:40:09] Lee: There were two things that happened side by side, one was the evolution of management techniques at BAS itself at HQ, moving from the Fuchs period and through the Laws period and beyond where it all became rather more professional!

Lewis-Smith: Very much so, yes!

[Part 2: 00:40:24] Lee: So you were in that process were you?

Lewis-Smith: Oh yes, yes, very much so.

[Part 2 0:40:28] Lee: Were you floundering at all or were you OK?

Lewis-Smith: No. Things just got better and better, I think! When I finished at Aberdeen University and started up the South Georgia programme, I moved from Aberdeen to Birmingham where the Botanical Section was based. I was there for five years. Then, at the end of that period, that's when BAS got its custom built institute in Cambridge, I transferred to Cambridge - where I remained until retirement. That was a really good move, with all the staff together, great facilities and having your own office and everything that entailed!

[Part 2 0:41:16] Lee: Meanwhile back in the Antarctic the work the biologists were doing was actually as you kind of touched on earlier, was beginning to demonstrate the physical reality of

climate change wasn't it? We had already, we hadn't actually got to the ozone hole discovery yet in 1985, but the work you were doing and the retreating of the ice and the colonisation of new land by plants, were you getting suspicious that something bigger was happening?

Lewis-Smith: Well, we make such a fuss of global change, climate change, these days – as if it's something new. In the early days when it became big news such a fuss was made about it! And yet I didn't see anything strange in this, it's something that had been happening since the 1940's quite clearly in many areas. I mean, for decades we were seeing photographs of receding glaciers in the European Alps and other alpine and polar areas around the world. It was just blatantly obvious that it was happening. You could see it clearly at South Georgia where glaciers were going back, and at Signy, in particular, there were signs that the glaciers were receding and thinning, long before I got there. How this was affecting vegetation or how the vegetation was taking advantage of the situation of the receding glaciers was, in fact, part of my initial project, but it wasn't given the same hype then. It was just accepted that it was a stage in a natural process or cycle. We knew that the ice levels had been at a higher level than they were when I got there. You could see this by the way that vegetation was growing on rock faces, especially where lichens came down to a certain point and stopped sharply, forming a 'trim line', although the present ice surface was maybe two or three metres below that. It was clear that the ice had extended up to that level at some time in the past. But it was more complex than that as, for the vegetation to be there in the first place, there had to have been far less ice on Signy for the surfaces to have been colonised. As the glacial fluctuations came and went over many millennia so did the vegetation cover over the island. Over the past few centuries, possibly much longer, since the last glacial minimum vegetation became more widespread than at present, minor fluctuations allowed an increase in ice cover which killed or removed much of it. In recent decades the warming summer climate caused the ice cover to recede again revealing moribund mosses and accumulations of peat formed by a few specific mosses centuries ago. Right now the ice margins and thickness are receding at an alarming rate. *[Note: This paragraph has been amended slightly to clarify what had been a poor explanation!]*

[Part 2 0:43:50] Lee: There was no, there was no great concern in your mind, you weren't getting nervous or worried about this, you weren't beginning to think there's something beyond natural causes?

Lewis-Smith: No, I didn't think of it in global terms I have to say, or....

[Part 2 0:44:05] Lee: Or being man-made?

Lewis-Smith: No, that wasn't considered in those days, it was just part of a natural cycle that had been repeated many times in the past! The fact that it probably is enhanced by mankind now, and is proceeding at a much greater rate than it probably ever has done in the past, does give us all reason for concern!

[Part 2 0:44:38] Lee: Well you were no longer being purely a recording scientist, you were now becoming more opinionated about what was going on weren't you? There was a sense, as I was talking to John Croxall the other week and he was originally a recording scientist, pure scientist, then he began to realise what was happening to the place he loved, South Georgia, and he became a campaigning scientist. Would you follow that path?

Lewis-Smith: Possibly yes, as time went by, maybe around the mid 1980's, I got more involved in conservation issues in the Antarctic, and the establishment of protected areas. Not protection from climate change but protecting special or sensitive areas from the possibility of damage by mans' intrusion. Initially the main concern related to the rapidly increasing tourist industry and its

potential impact wildlife and vegetation. However, many vulnerable sites also needed protection from scientists, because it has to be said that, if there has been damage done to an area for human reasons, quite often it's the scientists who are causing more damage than the tourists, because they [*tourists*] tend to be much better controlled! Anyway, I got involved in proposing areas for designation as Specially Protected Areas and Sites of Special Scientific Interest, and then writing basic management plans for these. I got involved in this through the Head of our Biological Division at the time, Nigel Bonner. He had a strong influence on Antarctic environmental protection, and because I had possibly visited a greater diversity of places than anybody, well anybody in BAS, I was asked to undertake this job. I spent one season visiting quite a number of these sites from the South Orkneys to Marguerite Bay with Nigel and assessing their suitability or otherwise for recommendation as a SPA or SSSI. Then, a case had to be made for this at various SCAR meetings, whether they were considered to be vulnerable in one way or another, and for my draft management plans to be approved, so I suppose that's my little bit of campaigning!

[Part 2 0:47:08] Lee: Was that something you enjoyed, or was it...?

Lewis-Smith: Oh, very much so!

[Part 2 0:47:11] Lee: It wasn't just an evil that had to be done!?

Lewis-Smith: No, no. Well, for one thing it got me into the field because I knew of so many potential areas that were particularly interesting, either through hearsay or that I knew from having visited them or just viewing them from a passing ship! If a site was going to be proposed as a Specially Protected Area or SSSI then you had to go there and confirm its suitability, so that got me into some interesting places as well – and added to my ecological survey of the Peninsula region! It maybe did distract a little bit from other aspects of my research and that of some of my staff, but no, it was very enjoyable!

[Part 2 0:47:55] Lee: You talked a bit of the management of BAS sharpening up over your 38 years with them. Did the way the biology programmes were handled, did that get sharpened up as well. Were there significant changes to the way science was conducted?

Lewis-Smith: Oh, I think so, yes. Yes it became very much more focused, the programmes were really quite sophisticated and, looking at some of the papers that are coming out now, a lot of research now investigates ecological and physiological processes in depth and modelling these. There is also a lot of emphasis on genetic aspects of the biota. To achieve this research programmes cannot be done by an individual these days. Nearly all the projects involve a group of people working towards a common goal, although individuals within these teams usually have their own little project as well. These more focused programmes are very much more, I suppose you would call it, 'Big Science' or 'Cutting Edge Science'! They're trying to answer much more important problems that have global significance, much more so than the sort of work we were doing as individuals back in the 60s! And of course these programmes require considerable funding to provide the logistics or the extra staff needed, and all the equipment and analytical facilities. It's just a totally different scene! Nowadays project leaders are largely responsible for attracting their own programme funding and spend much time writing grant applications to fund their work.

[Part 2 0:49:40] Lee: So the internationalisation you were talking about..... internationalisation of Antarctic science, really, aren't we?

Lewis-Smith: Yes, yes!

[Part 2 0:49:44] Lee: Bringing in various partner countries around the project was a wholly good thing, or was something lost in the process?

Lewis-Smith: Oh wholly good, and necessary. Yes. This had its foundations way back in early 60s and 70s again, where BAS sometimes invited a UK or foreign scientist to either work with a group, or come down and do his own thing, because he was a specialist in some field that BAS couldn't provide. But as time went by and more focused programmes were undertaken, yes there was much more international involvement, not just by inviting scientists from other countries into that team and going into the field. Such programmes created collaborations with universities and institutes, where scientists from one institute would work with those of another, and vice versa. As a result international conferences became increasingly important in bringing together scientists of many nationalities to present their research output and meet each other. They also provided the opportunity to develop common interests and share ideas, and plan new programmes and discuss who may be best to involve in the Big Science scheme!

[Part 2 0:51:12] Lee: So because of this our knowledge of the biology of the Antarctic was making leaps and bounds in the right direction, or was it?

Lewis-Smith: I would say yes, virtually everything that BAS has done, and I daresay many other countries also, are going ahead in leaps and bounds, particularly those that have a better infrastructure and are better funded, and have much more sophisticated national programmes. There are several countries which are very peripheral scientifically and are there only because they have to be seen to be conducting science, in accordance with the Antarctic Treaty!

[Part 2 0:52:04] Lee: Like Argentina!

Lewis-Smith: Argentina does some good science, but it is very much to support a political role. Yes, but some other countries have a very poor scientific output of rather low quality!

[Part 2 0:52:15] Lee: Did BAS always give the Biology Unit the backing it deserved, because it seems to me when there was a change of Director there was also a change of status of the various sciences, so if a Director came in who was a biologist, biologists would be the flavour of the month! Then if a geologist came in, biology would drop down again. Did you spot that or were you always given a fair crack of the whip at BAS!?

Lewis-Smith: I guess we were given a reasonable crack of the whip. I'd have to say that when, during the Dick Laws era, Dick himself being a biologist, and a very notable one, the biological programmes were slightly biased! In future years we tended to have more physical Directors and there was much less emphasis on the terrestrial biology programmes, although there was a big shift towards marine biology and ship-borne research, and I guess quite rightly so. You know, that's where the Big Science lay and it all ties in with the global climate change scenario. Much valuable work is being done there. But going back to the early days of when Dick took over from Sir Vivian.....

[Part 2 0:53:42] Lee: Sir Vivian Fuchs, yeah.

Lewis-Smith: During Sir Vivian's reign there was a surprisingly strong emphasis on botanical surveys and taxonomy of regional floras under Stanley Greene's leadership. His Botanical Section was based at Birmingham University at that time, and when Dick became Director he felt there was too much emphasis on the botanical work and not enough on the zoological side, so he whittled down the botanical section quite considerably and developed new research projects on birds, seals and fish, and marine biology in general. One of the reasons why I was promoted to

being Head of the Botanical Section was that Stanley Greene's group, which was wholly a taxonomic group studying the identification and distribution of plants, was hived off to the Institute of Terrestrial Ecology at Penicuik, outside Edinburgh. It continued to function very effectively, but NERC closed it down after a few years.

[Part 2 0:55:06] Lee: How, over your 35 odd years, how did you perceive the way that the attitude of FIDS towards their jobs and towards management, was there a change there? I mean you entered FIDS at a time when there was a great sense of excitement and dedication and loyalty, did that erode over the years or was it still strong when you left?

Lewis-Smith: I think the sense of loyalty has persisted. One of the really impressive things about BAS is the loyalty of its staff, mainly because anybody that has gone to the Antarctic, you know, develops an addiction to it! After you have been there once, you're bitten! I can't think of - well maybe I could if I tried - anybody who didn't enjoy their time south and didn't want to go back.

[Part 2 0:56:05] Lee: What made me ask that question was your own personal battles with the Herbarium!

Lewis-Smith: Oh, the Herbarium!

[Part 2 0:56:10] Lee: You brought all these plants back from the Antarctic [Lewis-Smith: Yeah.] and then BAS wanted to get rid of it!

Lewis-Smith: Well, we had a long battle with the Herbarium! The Herbarium is the repository for the plant collections and it had a certain importance in BAS. For one thing, over the years many people, including myself, had been collecting plants from various locations, and the BAS Herbarium is the largest in the world for Antarctic plant collections. This was significant and attracted a lot of specialists to examine specimens at BAS or request specimens on loan – worldwide. Now, after Stanley Greene's bryophyte group moved to Edinburgh, and we lost our lichenologist as well when his contract finished, we had no specialist in plant identifications remaining in BAS. I inherited this vast Herbarium, and at the time when all this was happening, in the mid-70s, Dick Laws was keen we get rid of the Herbarium. I had no say in this decision and, in fact, it was split up! All the bryophyte [*moss and liverwort*] collections went with Stanley to Edinburgh and I was left with the lichen collections in Cambridge. But I had nobody to work on them and, not being a lichen specialist myself - well not then anyway – the specimens were just stored in boxes for quite a long time. Then, when the Bryophyte Unit in Edinburgh was shut down, rather than have the specimens transferred to a university or museum, I convinced the Director that BAS, to take back the bryophyte collections and subsume them with the lichen collections – just as it used to be! I think if my request had failed the entire Herbarium would have been disposed of. As time went by collections were still being made from newly visited localities, and added to the Herbarium, but still I was not permitted to employ a specialist to take charge of it. Following the Falklands War BAS received a big injection of money to boost its science programme and visibility in the Antarctic, and it was again suggested to me that I should get rid of the Herbarium as it was taking up a lot of space, and nobody was really doing very much with it. However, I again succeeded in convincing both the Director and NERC of its historical and unique value since, by this time, I had specialists in several countries working on our specimens.

[Part 2 0:59:15] Lee: Having saved it for posterity once, how valuable is it now because...?

Lewis-Smith: Remarkably, the saga repeated itself again under a new Director shortly before I retired, but I managed at the very last minute, while at a conference in Venezuela, to arrange for

the Herbarium to go to Edinburgh Botanical Gardens. But unbeknown to me at the time I retired the person that I had appointed some years earlier to manage the Herbarium and run the database, Helen Peat, had been told she could retain the Herbarium at BAS. And so the turmoil continued! By that stage, around 2000, I was deeply involved with overseas specialists, in Norway, Poland and the Czech Republic writing floras for the different groups of plants and, as this work was at a fairly advanced stage at that point, the outcome of which was that almost all the many thousands of specimens had been identified, more so than in any other Herbarium in the world! We have produced definitive Floras for the mosses, the liverworts, the lichens and also the macro-fungi [*mushrooms, toadstools, etc.*] as a result of all that effort, and I am proud to say that I was the guiding influence behind these reference publications. Had I not been so persistent to see this achieved before I retired, nothing would have probably come of it! So, after decades of uncertainty, the Herbarium came good – and still persists thanks to Helen and specialists requesting loans of specimens!

[Part 2 1:00:55] Lee: Is that the highlight of your career, to save the Herbarium or what?

Lewis-Smith: Oh no!

[Part 2 1:00:59] Lee: What were the scientific highlights, what will you go down in history for Ron?

Lewis-Smith: I don't expect to go down in history!

[Part 2 1:01:06] Lee: In scientific history!

Lewis-Smith: Well, I guess I developed an ecological classification of Antarctic plant communities, such that many scientists from many other countries have adopted – but none has developed a more sophisticated system – yet! So I'm pleased to think I initiated that. A lot of the fairly fundamental physiological work that I undertook was, in due course, developed into much more focused and detailed programmes using far more sophisticated technology and modelling. Not that I was an expert in any of them, but I managed to appoint staff to undertake these more process-oriented programmes, and we produced some really very interesting results out of them. I'm pleased to say some of this type of work continues today.

[Part 2 1:02:16] Lee: You are happy with the way your legacy is being handled?

Lewis-Smith: Yes, yes, and as you say, or infer, the whole point about doing scientific research is to end up with a scientific publication which, whatever it was you are researching, is there in black and white for others to read! There for posterity, and it's encouraging that every time I read a paper that is even vaguely related to something I've published, I very often see that some of the key references are of my own work, and that is always satisfying!

[Part 2 1:02:57] Lee: You retired in 2002, most FIDS retire when they get back to Cambridge, but you weren't in Cambridge that day?

Lewis-Smith: No, I was in quite an interesting situation. I was actually on Deception Island, in the South Shetland Islands. It is an active volcanic island, an absolutely remarkable place with an interesting human history in that it had a whaling station, the only Antarctic whaling station, way back in the 1920s, but is now ruined of course. There are two functioning research stations, one Argentine and the other Spanish, lots of geothermal activity, fumaroles, and lots of very fascinating unique communities of vegetation as far as the Antarctic is concerned. The island had been proposed for designation as Specially Managed Area, a new category of conservation area.

Besides multi-national scientific research there, it is also the most popular site anywhere in the Antarctic for tourists to visit, not least because there are geothermally heated beaches. At high tide they steam and sometimes the water is exceptionally hot, and folk like to plunge in and have a swim. For many it's the highlight of their Antarctic cruise! So Deception was being used scientifically, it had a Historic Site - the remnants of the whaling station and former BAS Base, and numerous Specially Protected Areas with unique vegetation. So a big management plan was being developed to best protect these very sensitive areas and their biota. I was invited as a member of an international team to Deception, hosted by the Argentines at their station, and my remit was to assess the vegetation, particularly at the unique geothermal sites which are very vulnerable to human disturbance. So that's where I was when I reached the grand old age of 60 - with a colleague, Rod Downey. We had just climbed the highest peak on the island, Mt Pond, which was a terrific thrutch, not because it was particularly high - it is only about 1500 feet - but the slopes were very loose ash and it was sort of two steps up and one down all the way up from sea level! At the very summit there are a number of steaming fumaroles and the vegetation around them is amazing, to a botanist anyway! So having examined these we came back down to Pendulum Cove, which is one of the places the tourists go for the swimming. I'd left some of my equipment there, rather than take it all the way up the hill, and the main item of that equipment was a bottle of champagne! So Rod and I sat on a little rock waiting for our pick-up boat to come and collect us from the Argentine station, and we drank this bottle of champagne for my 60th birthday - al fresco!

[Part 2 1:06:14] Lee: We've got time for one more story then. We're spoiled for choice but I think I'd like to hear the story about the attempted mating with a Leopard seal?

Lewis-Smith: Oh, now that's....

[Part 2 1:06:25] Lee: This was post-career, your retirement career as a cruise lecturer and guide in the Antarctic?

Lewis-Smith: That's right yes, but it's the sort of story that really is X-rated and....!

[Part 2 1:06:42] Lee: Well we are past the threshold, the watershed!

Lewis-Smith: Past the watershed are we, right! Well, leopard seals are fascinating animals, pretty ferocious and quite sinister really. They are the largest of all seals, apart from bull elephant seals, the largest of the seals down south, and they have a very ferocious manner towards penguins and fur seals. They have a vicious set of teeth and a huge mouth! I was in my guide role in this Zodiac, an inflatable boat, with about a dozen tourists, just to the south of the Lemaire Channel. There's an area around Pleneau Island, known as 'Iceberg Alley', which is renowned for its grounded ice bergs, and is very, very scenic especially on a sunny day. We were admiring the shapes and colours and the ice bergs - just slowly cruising around looking for seals or orcas or anything of interest - when all of a sudden we spotted a leopard seal lying on an ice floe - a female I think it was.

[Part 2 1:08:56] [?]

We went up to the floe and everyone took photographs of it, then suddenly another one appeared in the water beside us. It seemed to be circling this little ice floe, but the next thing was it came right alongside one of the tubes of our Zodiac. Of course, this was very exciting for all the tourists, who'd never been so close to a leopard seal before! The next thing that happened was that it put one of its huge fore flippers right up over the side of the boat as though it was giving it a great big hug! And then, because we knew just how fierce these animals can be, and there'd

been a fatal accident at Rothera a few years earlier with one, people got a bit concerned about this rather friendly leopard seal! Then its head came up as well a bit farther along the tube, flipper over one part and then the head appeared over the side with a big gaping mouth! By now we thought this animal was trying to attack us, so we had to hit it on the flipper to encourage it to go away, but it wouldn't! By then.....the tourists who were in the boat were beginning to get really worried, some of them were shrieking and others were trying to take photographs and nearly falling out of the boat. It appeared that the animal was definitely trying to climb in - then it rolled over on its back, and you could see clearly what it was all about because this large male leopard seal was in fact trying to mate with this inflated tube of the boat!! It was very embarrassing I tell you! [much laughter!]

[Part 2 1:10:00] Lee: What, were you having to explain this to the tourists!?

Lewis-Smith: I think it was fairly obvious to them all what its intentions were! [Laughter!] It was more a case of trying to prevent people from fainting!

[Part 2 1:10:09] Lee: How did the situation resolve itself?

Lewis-Smith: Well, we managed to extricate the seal, with a little bit of force, from the tube, and just push it away. Fortunately, he lost interest and decided that it maybe wasn't as good as the female on the ice floe, and he went off to investigate her!

[Part 2 1:10:32] Lee: I've never heard that story or anything like it ever before! It's been a real pleasure, Ron. Thank you very much indeed.

Lewis-Smith: Thank you very much Chris, it has been very interesting trying and answer your questions!

Possible extracts:

- [Part 1 0:10:48] Meeting Scout Marr and Dr Macklin in Aberdeen.
- [Part 1 0:18:00] Meeting Peter Scott.
- [Part 1 0:33:01] Tied up alongside the Queen Elizabeth.
- [Part 1 0:39:18] Having to make some his own scientific equipment.
- [Part 1 0:46:28] Some very large Antarctic clothing issued!
- [Part 1 0:54:15] First introduction to field work, without any field training!
- [Part 2 0:18:06] Pure science at Signy Island during the winter!
- [Part 2 0:20:26] Uphill skiing at Signy Island!
- [Part 2 0:22:41] Taking a big risk on very poor sea ice.
- [Part 2 0:30:59] Sailing home on the ship with a shortage of food!
- [Part 2 0:33:24] Becoming head of Botany with BAS!
- [Part 2 0:56:10] Fight to Save the Herbarium at BAS HQ.
- [Part 2 1:01:57] Retirement but in the Antarctic at Deception Island!
- [Part 2 1:06:42] Frisky leopard seal while out in a Zodiac with tourists!