

Interview with George Brown, September 19, 1997, by Max Geier.
Transcribed by Brooke Warren.

George Brown began his engagements with the Andrews Forest in Summer 1964 digging soil pits, processing soil samples, and surveying, under the supervision of Forest Service scientists Jack Rothacher and Ted Dyrness. He began his PhD studies in Forest Engineering at OSU that Fall, and his academic career progressed through the ranks from assistant professor to full, to department chair, and on to Dean of the College of Forestry, so much of his involvement with the Andrews was administrative and supervisory. A crucial contribution was organizing workshops on "Logging Debris in Streams" in 1975 and 1977 at a time when that was a critical question for regulation of forest practices and the basic science of the International Biological Program era at Andrews Forest was focused on carbon and nutrient budgets in streams flowing through natural and managed stands. Those circumstances triggered the work on wood in streams for which the Andrews Forest is widely recognized.

Max Geier: This is the interview with George Brown. The place of the interview is George Brown's office in the College of Forestry. The interviewer is Max Geier. The time of the interview is 2:00 in the afternoon on Friday, the 19th of September, 1997. George Brown is the Dean of the College of Forestry at Oregon State University.

Geier: Get this thing going before I forget. So, I wanted to start out here maybe with a little bit of background on yourself.

George Brown: Okay.

Geier: How you got involved here. Ted Dyrness tells me you did your graduate work here at the Andrews in '63. Right?

Brown: Yes. I did some of it there. I came here after I got out of the military in 1964, and I had arranged to work here in the Corvallis laboratory for Ted and Jack Rothacher; they were kind of my two bosses. And that was sort of an interim position until I began my Ph.D. work at Oregon State in the fall of '64. So, that summer was a very interesting summer. I worked on a number of projects, on all of the study watersheds from Coyote Creek down at Tiller [Ranger District on Umpqua NF] and the Fox Creek watersheds [Bull Run Watershed, Mt. Hood NF]. Did everything from boundary survey to just an immense number of soil pits, it seems like an endless number of soil pits, with Ted [Dyrness]. And then did a lot of soil physical and chemical analyses of those samples that we took out of the pits. Everything from bulk density to particle size distribution, to some of the pressure plate profiles on soil water retention. Also some chemical analyses as I recall. But it was kind of a complete, sort of a spectrum of "soil stuff." But, we would do other kinds of things, instrument chart changing and that sort of stuff, during the summer months. And later, I terminated with them, when school began.

Then, my doctoral dissertation was on the impact of timber harvest water temperature. Basically, I put together an energy balance model for predicting stream temperature. One of the study sites that I used, which was just an ideal place to do this, was the H.J. Andrews Watershed 3, down in the lower clear-cut. It was a great place because, if you're familiar with that stream down there in that lower clear-cut, it's almost like the sun comes on and the sun goes off, I mean, it was such that the sun would come up over the stream, and this blast of direct beam radiation would hit the stream, and then at four in the afternoon, the light turned off, essentially, from the direct beam, and it was great. I mean, you didn't have to worry about the sort of sampling problems with patches of shade and patches of sun. I mean, it was on or it was off, a great place to do some of these studies.

Geier: So, you did your undergraduate work at Colorado State?

Brown: Colorado State, yes.

Geier: And your masters, also? Right?

Brown: Yes, I did.

Geier: If you could talk a little bit about your background and how you came to be interested in working out here in the Northwest. You started out there in Colorado, so are you from there, or -- ?

Brown: No, I grew up in Missouri. So I've kind of moved west. I got a Bachelor's Degree in Forest Management, and that bachelor's degree, was a great opportunity at Colorado State. It's a great school, and it was one that, at that time, well it still does, it had a number of departments in the college, and you were able to take courses in fisheries and wildlife and range and recreation and those sorts of things, and really get a very broad natural resources background. About the time I entered, started in my junior year, had an opportunity to work in the woods a couple of summers, and my interests changed. And in part, because of an association with a guy who was a good friend of mine and was very excited about the brand-new program in watershed management that had just started at Colorado State. Mind you, this is back in the late '50s when watershed management, there were only one or two places around the country that did offer that degree.

Geier: Who was that person?

Brown: Bob Dills.

Geier: Bob Dills.

Brown: Well, he was the professor who led the program. And Bob was a very enthusiastic person. Well, I talked to him about the possibilities of doing a Master's Degree in Watershed Management, or even transferring. He suggested that, since I was so far along in my undergraduate program in forest management, I complete that degree, use my free elective credits to take calculus and some other things that were not required in a typical forestry curriculum at the time, and get ready to go to graduate school. He offered me a graduate assistantship, and in that master's program, I had just a tremendous education experience. It was kind of a young, green kid who was in graduate school with a bunch of seasoned veteran folks that had been out and about and they were very serious about what they were doing, very enthusiastic, and both of those things really rubbed off on me. And so I really enjoyed the master's program. And while I was there doing a masters, one of the people, became a close friend, Jim Krygier. That's K-r-y-g-i-e-r. Jim was a professor here at Oregon State. He was on a sabbatical leave at Colorado State, taking his course work for a Ph.D., in watersheds, there. So, Jim and I, spent a lot of time talking to one another. We were right across the aisle in the graduate bullpen, our desks were close. And then I had to go into the service right after my master's degree. I had a commission.

Geier: What branch of service was that?

Brown: Army.

Geier: Army, okay.

Brown: I suppose I could have delayed for a Ph.D., except for the fact that the Berlin Wall went up, President Kennedy mobilized all the reserves, and people who were in my kind of position, were immediately called up. I was fortunate to finish the master's degree without having to break and go on active duty. Jim [Krygier] had said, "Well, let me know when you're gonna get out of the service, and I'll see if there's anything at Oregon State I can offer you." So I did. He had gotten started on a program called the Alsea Basin Logging and Aquatic Resources Study. It was a cooperative study, the first of its kind really, to look at the impact of timber harvesting on aquatic resources. He needed help with that. The college's role was to do temperature studies on the hydrology in the interior of the largest watershed. The geologic survey had gauging stations at the mouths of these three small basins, but we were looking in the patch-cut watershed, at a much more, micro-level response. Jim needed help with that. I did the water temperature part and at the same time, did a doctoral dissertation on this energy balance approach to predicting stream temperatures. That's really how I came to be here at Oregon State.

Interestingly, at the end of my Ph.D., Jim was having some serious health problems, and they never did I think discover exactly what it was he had, but the doctors predicted that it was quite likely to be terminal. Fortunately, it was not, but in anticipation of Jim's declining health, the department had asked me if I would stay on the faculty after I finished the Ph.D., and continue to lead the research on the watershed study. Also, to

pick up Jim's classes and to give him some relief, which I did. And sort of the rest, is history.

Geier: That was '66?

Brown: '66. And so, I've been here ever since.

Geier: Can't get away.

Brown: Yeah.

Geier: I'm curious, I think you covered this, but maybe a little more detail here. What was it exactly that got or drew your attention to the Andrews, when you found this great place to study? What first attracted you there?

Brown: Well, I'd been there as an employee, I'd been there as a worker. And I'd spent a lot of time banging up and down the stream channels with Ted Dyrness and Jack Rothacher. We'd dug soils pits all over the place, and I remembered this nice, straight, open channel that was unshaded. This is the time before there was any riparian protection, I mean you cut right down to the creek bank, and so it was a very open, open stream. There was a gauge at the bottom, so I didn't have to go out with a pygmy meter and measure stream-flow, I mean, it was already being recorded on a continuing basis. There was just all kinds of attractions there, and it was a familiar piece of territory.

Geier: So the existing infrastructure of it, the site, was something you considered, the stream gauges and stuff like that.

Brown: Oh yeah, sure. Right.

Geier: Do you remember your first impression, when you first started working there with Ted doing these soil pits, what was your impression of the place was at that time?

Brown: Oh, I was blown away by it. I'd never been in a place like this. Coming from Colorado, and all of a sudden finding yourself in stands, mixed-conifer, old-growth stands, was quite an experience. I remember the first day I went down there was with Jack Rothacher and Ted, and they were, it was partly a "show-me trip" [informational tours], but we were also doing some work while we were there. We got up to, I think we drove up the road, it brings you up on the watershed, above the boundary of Watershed 3. We got out of the truck, there were these giant trees, and Jack Rothacher said, "Okay, it's time for a dendrology lesson. Tell us what these trees are." Well, it was a mixture of western red cedar, hemlock, and Douglas-fir. I looked up to see if there were some distinguishing characteristics, and of course, the limbs are up at 125-300 feet, so I looked down on the ground, and there was this mixture of cones. I couldn't

tell one from the other. Because in Colorado, most site test specimens we used in dendrology, which had been, good grief, I'd taken dendrology almost eight years before, were all in a contained little thing you could look at and get your hands on. Here, everything was up, and I had no clue as to what the bark characteristics were of the trees. But it was a great place, and I spent a wonderful summer there, going back-and-forth. We would live down there [Blue River] in some beat up old trailers. It was not what you'd call gracious living. It was in a trailer court right across the highway from the ranger station. Dick Fredriksen was the resident hydrologist on site, and Al Levno worked with him. Both of them lived in Blue River, and both, I think on the ranger station compound. But then we would go up periodically for these special things.

Geier: Do you recall at that time, what your knowledge was of the function of an experimental forest, and at this place, definitely, the reputation of the Andrews? Had you been around it at all before that?

Brown: Nope.

Geier: All new to you?

Brown: Yep.

Geier: Aside from Ted, who you were working with, and had you heard of any of the scientists that were working down there at that point?

Brown: Yeah, I heard of Jack Rothacher.

Geier: Okay.

Brown: And I'd read some of the stuff that he'd written. But that was pretty much it.

Geier: And Ted, you had met here on campus?

Brown: Well, I showed up to work for Ted.

Geier: Oh, okay.

Brown: So, I kind of showed up over there, and that was the first time.

Geier: So, he introduced you to the whole concept of the forest [experimental forest].

Brown: Yes. But the forest [Andrews] was a very different place then. They were just beginning to do harvesting experiments. I mean, this was back in the infancy. There'd been a few harvest units done up there that Roy Silen had put in place, and there were these three watersheds that were kind of the start of the experiments, and they had just begun to harvest. They'd finished the harvest on Watershed 3 while I was there in '64,

and they were finishing up the harvesting on Watershed 1, which was using a crane system [Wyssen] that was in place. And they were still doing the yarding on that.

Geier: That was [unintelligible].

Brown: Yeah.

Geier: His operation, yeah.

Brown: Right.

Geier: Besides from the trailers at the Blue River Station [Ranger District], can you remember much about the facilities? What else was there?

Brown: The ranger station. And Dick Fredriksen may have had some kind of little laboratory facility in the ranger station, but it wasn't much. That was pretty much it. None of the stuff up there on the forest that's there now, was there.

Geier: And Jack Rothacher's living down there at the house. 

Brown: Not when I was here. He had transferred down here to Corvallis, and I think Fredriksen was probably living in the place he was living in, or had been living in, because Dick lived on-site.

Geier: Where did he live, Fredriksen?

Brown: He lived in the compound.

Geier: The compound, okay.

Brown: Yeah.

Geier: How much interaction did you have with Blue River, the people in Blue River?

Brown: Almost none.

Geier: What did you do when you were not working?

Brown: Well, there wasn't much to do, honestly. It was before the dam [Blue River]. The dam was not in place then, and kind of the big event of the day was, where we were going to dinner, and we had only a couple of places to choose from. (Laughter) And then, after dinner, there was a lot of conversation and you read books, stuff like that. And what I did was, I spent a lot of time getting ready for my German exam and my French exam.

Geier: Good place to study.

Brown: Yeah, in those days, the Ph.D. required two languages, and I had studied German in an Army language school, and so, shortly after I got here, I took the German exam, and then immediately shifted to trying to learn French on my own. So, I spent a lot of time doing that in the evenings.

Geier: If you could, what were the results of your research that you were working on when you were doing your doctoral research out there?

Brown: Well, I put together a stream temperature prediction model that was energy-balance based, and it worked fairly well. I also ultimately took that model, because of the predominate importance of net solar radiation, and put together a kind of quick and dirty thing that managers could use for predicting the impact of opening streams at various reach lengths, and temperature changes that would occur within that unit. Again, this is before the time of riparian buffer strips [vegetation along streams] that were required later. This also demonstrated the importance of shade and controlling stream temperature. But that was kind of the thrust of the research.

Geier: Were you working with anybody else on that research, or was this something that you kind of did on your own?

Brown: No, it was all my own. I mean, it was a typical doctoral dissertation. You're kind of given the problem by the major professor and some grant money, and you did it.

Geier: Do you recall much interaction among different scientists down there when you were working there? I guess I'm trying to get a sense of the kind of community that existed there among the people working on the forest.

Brown: There was a very close working relationship within the watershed group, and Jack Rothacher was a marvelous project leader. He and Ted worked very closely together, and also with Dick Fredriksen and Al Levno. They were a really close-knit team. And I, for a short period of the time, became a part of the team, and they were great people to work with. I thoroughly enjoyed it.

Geier: When you were done working, did you come up here to Corvallis, or did you spend almost all your time while you were doing your study down there?

Brown: No, most of the time was here. We would go down and live in the trailer periodically. You know, we'd be down there for a week at a time, and then come home and what not. So it was. And then we were at other places. We did work on the, as I said, at Tiller [District] on the Coyote Creek Experimental [watersheds], or South

Umpqua, I guess it's called, the South Umpqua Experimental Forest. And then up at the Bull Run, which is where they have the Fox Creek Watershed.

Geier: The close-knit team that you're talking about on the watershed, these are people who were interacting here on campus? Or did you see that when you were working down at the Andrews, or both?

Brown: Kind of both.

Geier: The question that has been perplexing me here recently, as I get into my research a little bit, is the kind of evolving relationship between people in the OSU College of Forestry and the [U.S.] Forest Service. How would you describe interaction among those two groups in the early '60s? What would you talk about there?

Brown: Well, there's a lot, in addition to the interplay between Jim Krygier and Jack Rothacher and Ted Dyrness. Ted got his Ph.D., as I think you know, under Chet Youngberg. There was this interaction between Chet and Ted. At the time, this building was not in place, and we were up at the so-called, "Old Forestry Building." It's now called Moreland Hall. There were scientists there that worked with our faculty. They had some awful lab space down in the basement, almost in the furnace room kind of thing. (Laughter)

Geier: They had Forest Service scientists?

Brown: Yeah, Forest Service scientists with our people up there. Bob Ruth [Forest Service] and Bill Ferrell [OSU], for example, worked closely together, and there may have been some others that were actively involved. But it was a small community. I mean, the lab here was nowhere near what it is now, of course. They had just recently built the new facility, the first story, the little low place, the one-story piece of that building [of Forestry Sciences Laboratory complex], just before I had arrived, and so they felt these were great new digs for them and people who were in that complex.

Geier: So, the Forest Service people moved over there from the old building first.

Brown: Right.

Geier: My understanding is that it was kind of a phased development of that new building over there.

Brown: Yes.

Geier: And they started to kind of open there. At what point did faculty here begin to move into that building?

Brown: About, can't remember if it was 1980 or '81, but we moved the Forest Science Department, almost all of it, up there then. We rented the space, and we've been there ever since.

Geier: That was '81, you said?

Brown: I think it was '81.

Geier: '81, okay.

Brown: Maybe it was 1980. I'd have to think about that for a bit, but it was around that time.

Geier: Do you recall the reasons why that move was made at that point?

Brown: No, although I think it was the fact that they may have gone through a budget reduction and had space available, or simply that they had added this new structure there, they built the other part of it, and simply were unable to fill it.

Geier: Okay. That's when Carl Stoltenberg was dean?

Brown: Right.

Geier: Maybe you could talk a little bit about what your perception is of the impact of that move. How did that affect -- ?

Brown: Well, it did a number of things. It certainly gave us access to some wonderful facilities. I think if you compare, we had the Forest Science Department, some here, but mostly in the old Forestry Research Lab, which was a building built in the early '50s, and really not very good laboratory space. So putting them over here certainly upgraded the facility quality immensely, and it also provided us a host of new colleagues for them to interact with. But, we've had this ongoing, and maybe you're gonna get to this in a minute, but we've had this ongoing tremendous working relationship with the Forest Service for a very long period of time.

The kind of the thing that brought it about, I guess I'd say, accelerated that interaction, was the National Science Foundation's International Biological Program, or IBP. Once that happened, it provided a very large, new source of money. And Jerry Franklin, who was Principle Ecologist in the Forest Service here, and Dick Waring, who was a faculty member, now a distinguished professor at OSU, really provided the bulk of the leadership for this program. University of Washington was also a partner, in what was called the Coniferous Forest Biome Program, and they really provided tremendous direction for this research. And the OSU portion of the research was extremely well done, and they, these two guys, pretty irreverent about how they distributed these

funds as P.Is., and by that I mean, they were very hard-nosed about having scientists that were gonna produce quality research, and that may not have meant having people that were already on the faculty.

We had a very different faculty then than now. The faculty in the college were a lot less research-oriented, and so what Waring and Franklin did, was recruit a bunch of young hot dogs that were really go-get-em types, young post-docs. The names will be immediately familiar; Fred Swanson and Jim Sedell, Phil Sollins, and a host of others of that kind. These are people who were really aggressive, good, no-nonsense scientists. I mean, they were going to go out and get the job done. They were tremendously excited about the opportunity to put together a major ecosystem model for the way the coniferous forests of the Western Cascades operated. Now at that time, I was a hydrologist on the campus, and I chaired the hydrology committee for that initial IBP program. And so it was a great experience, and kind of a very heady time. That did a couple of things. It really set the stage for strongly-integrated, interdisciplinary systems research, and that became the *modus operandi* which has continued today. People marvel at the way in which scientists on this campus, that includes the federal agency scientists, work together. Well, it's a habit. It got started when people were young and they were not fighting over turf and they were really interested in doing this systems work.

Franklin and Waring played a very critical role here in helping us collectively to work together on a complex issue. Very demanding people, they really pushed everybody very, very hard. And so at the end of this, the Forest Service took these post-doc people, basically, and turned them into Forest Service scientists. Okay? So the fact that they (laughter) started wearing a green shirt [Forest Service] didn't make a bit of difference, they just kept doing as they were doing, and that was interacting with the faculty and sharing facilities and writing grants together and continuing the work with the National Science Foundation. And of course, the National Science Foundation was ecstatic about what these guys were doing, because they were successful. I mean, this was a place that the National Science Foundation could point to and say, "See, ecosystem research can be done, and it can be done successfully." After IBP ended, the next program which this slid right into, was the Long-Term Ecological Research [LTER] program, and we haven't missed a step. I mean, it's just continued to go right along. So, I think the IBP program started in something like '68 or '69, and you know, we've been at that 20 years.

Geier: Interesting.

Brown: Or 30 years, good God! (Laughter)

Geier: It's an interesting focus when you decided to pick up post-docs to do this kind of work.

Brown: Yeah, it created quite a stir. There was a lot of friction about that.

Geier: I was going to ask you about that.

Brown: Because some of the older scientists sort of assumed this money was going to come out automatically to them, but it did not. And it did not because of what these guys were asking them to do. "We want you to do this kind of work on this piece of the system, we want it to be able to tie in backwards and forwards, okay, and we want it by whenever." And a lot of folks were just unable to fit into that kind of a thing.

Geier: Sounds like there's a certain kind of adaptability to be willing to focus, refocus their research or --

Brown: (Interrupting) -- right, and to really rethink how you do research. I mean, you're not just there doing your thing, you are part of a team and you have a very crucial part of that box to fill in, and we're counting on you to do that. And we're not just counting on you to fill in the box, we're counting on you to fill in the box in a way that ties with the other sides of it.

Geier: Now, let's see. You chaired the hydrology committee for the IBP program, so you were involved with the recruitment of some of these people. How does that work?

Brown: Yeah, well the people I had on my committee were not post-docs. We had a young scientist by the name of Dennis Harr, who then, was an assistant professor and eventually went to work when Jack Rothacher retired, permanently for the Forest Service; again another one of those linkages. And we recruited a hydrologist out of, I think University of Nevada-Reno, by the name of Gurgy, who was a modeler. Well, he did not (laughter) live up to our expectations, let's just say that. I stuck with this program for about three or four years, and then was appointed department head in Forest Engineering, and had to give it up, and I think Dennis Harr took over the hydrology piece.

Geier: Went by this pretty quickly, and it's a small point, but I wanted to get a glimpse here of what's going on. This guy Gurgy, who didn't work out, was there any particular reason for that?

Brown: Yeah, he just never was able to successfully put together the kind of models that we needed.

Geier: Okay, so the product wasn't coming in.

Brown: Right.

Geier: Did, did it have anything to do with the kind of group environment there?

Brown: I don't think so. Well, in a sense, he was a long way away, physically.

Geier: Okay.

Brown: Yeah, so we'd send him stuff and nothing would ever come back.

Geier: Where was he?

Brown: Nevada. Nevada-Reno.

Geier: Okay. He never came out?

Brown: No, he did not join us, he stayed where he was. He was a professor there.

Geier: Oh, I see. Was that unusual?

Brown: Yeah. Although the other piece of the IBP program for the Coniferous Biome was the University of Washington, and Dale Cole [UW] chaired that group. And they operated kind of independently, but Waring and Franklin would contract with other faculty from other places to help out with certain pieces if they had some specific expertise. And Dick can tell you about that in a lot more detail than I.

Geier: Yeah, I'll talk to him. Were there any problems with recruiting people to do this, I mean, was this something that people wanted to do?

Brown: No, if you had money.

Geier: Yeah.

Brown: (Laughter) That's one of the marvelous things, money.

Geier: And in terms of where the research had to be done, much of it was done at the Andrews, was there any concern about that, or coordination of the work down there?

Brown: No, they did a marvelous job of coordination. Dick Waring is a very, very well-organized person, and the fact that we were working on a same, a similar site was, I think, a great advantage. Although there were studies done in other kinds of locations and places, for example, some of the lichen work that got done was done out here on the research forest of the college.

Geier: Oh, the McDonald.

Brown: Right. But, the Andrews was a great location, it got people together, and there was a tremendous amount of good communication. There would be these meetings on

a regular basis, sort of sharing what you know and what you're doing. And we were breaking a lot of new ground in those days, particularly in the biology areas, learning about the importance of the under, beneath the surface of the soil system and all the nutrient cycling and all the importance of insects in that role, looking really at the complexity of old-growth forests, which people had not examined. The common knowledge of the time was that these were systems that were really kind of stagnant and dying, they weren't productive. But, my gosh! There was all kinds of stuff going on in those forests. And they did some really incredible work up in the crowns of these things, looking at the dynamics of what goes on up there, finding all of a sudden, my gosh, you've got all sorts of animals up there living. It's not just the spotted owl, it's the red-footed tree vole and any number of other critters up there, and then there's this lichen system up there which is sucking nutrients out of the air and depositing them down on the ground as they fall. So there was some really gee-whiz kind of stuff that came out of that.

Geier: Do you have any perception of what the reaction to this kind of research was from the standpoint of forest managers in the industry, for example?

Brown: Well.

Geier: Or the National Forest Service?

Brown: Yeah. Ultimately, and by ultimately, I mean, probably there was a lot of mystery about what was going on up there. But the Forest Service in my view, the National Forest System's piece, those guys have been very, very cooperative right from the get-go. And there have been a series, we have been very fortunate, particularly the last 10 or 15 years, a series of rangers who really put body and soul into making that place work. Because while it is a PNW Station facility, the ground is managed by the National Forest system. So you had to have good cooperation with the ranger district and Willamette National Forest. And that was really one of those models, I believe, of interaction.

Geier: Can you think of any people in particular that would kind of fit that?

Brown: Oh, sure. Steve --

Geier: -- Eubanks?

Brown: Yes. Eubanks was a classic, personally very interested in what was going on, the current ranger, and his successor, wish it would recall who it was.

Geier: Lynn Burditt?

Brown: Lynn Burditt, thank you. Hell to get old. Lynn is another one who is very professionally interested in what's going on out there. Both of those folks, and there probably were others as well, but those two in particular, saying "Hey, let's start seeing if we can apply some of this stuff operationally outside of the research forest."

Geier: Now, Steve came in, I think, in the mid-80s, and Lynn is current. Before that, when the IBP was going on from '68 to about '75, was there much of a sense of what was going on? You said it was kind of a mystery at that time.

Brown: Well, there wasn't as much interaction as Lynn and Steve did, at least my sense was that was the case. Now, this is spoken from afar, and the best information you're going to have about that is Jerry and Dick. But I think this has been a place where the Forest Service has really been interested, has paid a lot of attention to what's going on up there, has been very helpful in facilitating operational things, like harvest and thinning and planting, and road construction and site development. I just think they've just done a marvelous job. Again, a real example of agency and university cooperation. As you know, probably from experience, you can't tell the players without a program. You go up there on field trips, and the Forest Service scientists and the University scientists are interacting, they're telling this part of the story and that part of the story, and we've got Art McKee who is site manager and an OSU employee. The guy who manages programs is Fred Swanson, and Fred's a Forest Service employee, but we're working off of a National Science Foundation grant that comes to the university [OSU]. It's the way it ought to be, not to be restricted by these boundaries.

Geier: I'm just trying to think, in the middle of the IBP research, were there many of those kinds of trips and tours taking place that you can recall?

Brown: No, not nearly as many as there have been of late, at least my sense is that that wasn't the case.

Geier: Yeah, right.

Brown: Dick can answer that question better than I can, but I mean, these guys now are almost loved to death by people wanting to come up there and see this place. You know, this now is after a 30-year track record of a stack of publications, and this place being, kind of known as one of the meccas of forestry research in the country. The IBP program was really the beginning of when that started to occur.

Geier: The IBP era is when the place kind of gelled in terms of scientists coming together and, and really focusing as an interagency kind of -

Brown: Well, it moved from being a Forest Service experimental forest, in which the money, the scientists, were primarily, if not almost exclusively Forest Service, to really, a

much bigger thing. It became a regional, then a national, and then kind of an international research facility. It really did.

Geier: Up until that time, nobody'd heard of it.

Brown: Not much, you know. Well the forest [HJA], well, people here knew about it, but probably not very many places beyond that. When I was in school in the '50s and early '60s, the place for a hydrologist to go, the mecca then, was the Coweeta Hydrologic Laboratory in North Carolina. Okay? That was kind of the grand-daddy of them all. And there were other experimental forests. There was the Fernow Experimental Forest up in the Northeast [West Virginia], but that was kind of it. And the Andrews really didn't become a focal point until after that, I think, until after the IBP program really cranked up. I mean, that doesn't mean that there wasn't good work going on here or that it wasn't important stuff, it was just the visibility that came with that IBP program, this bunch of young "hot dogs" doing some really great stuff, and just like that, it took off.

Geier: Now, as a member of the faculty in the College of Forestry [OSU], during this IBP period, what was your perception of the purpose of the forest, experimental forest at that time, one such as the Andrews? And what I'm thinking of here, is comparisons between that and the state of the McDonald-Dunn Forest. What are the different roles that they play in terms of your program here and what you expected of it?

Brown: Then?

Geier: Yeah.

Brown: Well, there wasn't was much research going on at the McDonald-Dunn Forest then. This is a forest that's really kind of grown up in a 30-year period. We got it as a cutover in the '30s, and from then to probably the early '60s, it was trying to get the thing restocked and replanted. We had CCC people doing planting up there, and faculty and students would go up for what they called Arboretum Day, and cut brush and plant trees. From the early '60s until probably the early '70s, maybe the mid '70s, the management plan for there was to produce some revenue for the college and to clean up the damage from the Columbus Day Storm [1962]. That's kind of the management scheme. But the trees just continued to grow and we've got a remarkable facility there now. Whereas down on the Andrews, you had a lot more money. I mean, it was a targeted research effort, and you had better money and facilities there, coming through the Forest Service, than we ever had coming through the state. So, very different. The one experimental program that we had that I think, at least in its day, was sort of a visionary rival to the Andrews, was the Alsea Basin Logging and Aquatic Resources Study. Because that was very new, it was an interagency cooperative program, it had some money, and allowed us to for the first time, to look at interactions between harvesting and water quality and fish. The Andrews was looking at harvesting and water

quality, but not so much the fish part, and particularly not the kind of anadromous fish we were dealing with over there.

Geier: Now, was the [U.S.] Geological Survey and Oregon State University?

Brown: It was Forest Service, Geological Survey, Federal Water Pollution Control Administration Lab, which was the precursor to the EPA, and Oregon Department of Fisheries and Wildlife. No, that's not right. It was the Oregon Game Commission. That was the precursor. We used to have a game commission and a fish commission and they merged into ODF & W (Oregon Department of Fisheries and Wildlife), and so, this was before that, and this was when the Game Commission which was responsible for sport fisheries. At Oregon State University, the program was coordinated by Jim Hall, who is now Professor Emeritus in Fisheries and Wildlife. And I think Georgia Pacific was an industrial cooperator. I think that's kind of the mix of them.

Geier: I'm trying to get a grip here. One of the leading differences with the Andrews, seems to be a lot of private land involved in the McDonald-Dunn Forest. Is that right?

Brown: Some. Two of the three experimental watersheds were Forest Service, the third one in which we did the clearcutting and burning, was Georgia Pacific land.

Geier: Okay.

Brown: On a much smaller scale in the Andrews, and three watersheds for a very specific purpose and for a relatively short time, like a 15-year study period.

Geier: Oh, okay.

Brown: So, it was not ongoing. Although Jerry Franklin was able to get the control watershed in the Alsea Basin declared a research natural area.

Geier: I'm trying to think when was it that you became dean [OSU-COF] here, '80, or was it the late '80s?

Brown: No, 1990.

Geier: Oh, okay.

Brown: Yeah, January 1 of 1990.

Geier: But I've been thinking, until that point, you were acting as, you were just were on the faculty, right? Were you chair of a department?

Brown: Well, let's see. I joined the faculty in '66 as an assistant professor. In 1973, I was appointed head of the Forest Engineering Department. And then in, must have been '86, I became Associate Dean for Research, and then in '90, was selected as Dean.

Geier: What I was going to ask here is a little bit difficult, testing your current position as dean, looking back on the history of the college and how developments at the Andrews have influenced priorities and mission at the College of Forestry at OSU. What kinds of change do you see resulting from the kinds of work that was being done at the Andrews?

Brown: Well, I don't think it changed our mission at all, but I think what it did very clearly, is it resulted in a lot better science integration in our Forest Science Department, in the biology part of what we do. It brought us a lot of just tremendous young people into the college, with obviously different interests and attitudes. But it also was the first time our faculty, or a large percentage, had worked together on a systems problem. Now, we worked on, sort of a general kind of systems problem with the Alsea Basin stuff, but it was never put into the context of a model. And we worked cooperatively with people from the agencies I just mentioned and, and across campus in fisheries and wildlife. But the Andrews work, starting with the IBP program, and then going to the LTER, really, I think helped demonstrate the premium that high quality team research can give you. And I think that's been really the best legacy, if I could say, from the Andrews effort. And then, there's some great people that came as a result of that, that have been working on, basically the soft money that has been generated from that, for years.

Geier: There's a paradox there that we're looking at in the study, which is the paradox of long-term ecological research being funded with soft money, short-term money, and some of the strains it causes on people.

Brown: Oh sure, I agree. And it is a paradox. But it's unfortunately, the tenor of the time. I don't see any other option because our traditional institutions, the funding for those, is continuing to be reduced over time. I mean, you can't count on a decent research budget and increases every year, in either a federal or a state budget. And so, it has taken that kind of long-term commitment by the National Science Foundation, soft money yeah, but I think then, my sense is, and this might be totally wrong, but my sense is that that National Science Foundation has got a lot at stake in the LTER, and in the Andrews. I think they want to continue to invest money in this over time, and I think if we quit doing good research, and if we do not provide good stewardship of the funds, and we invest in dumb research, they're going to pull it. But my sense is that, as I said a moment ago, this gives the National Science Foundation a tremendous example to point to and say, this is what you can do with good ecosystems research. I just think it's a glorious example for them, and barring some unforeseen catastrophe, I think we've got a shot at continuing that program for a long time.

Geier: So, the paradox is not so much a paradox as it's self-perpetuating.

Brown: Yeah, it's just in that sense, in my view, it is. I think the National Science Foundation would be dumb to cut this kind of money. I think they could be held up to tremendous ridicule, so long as we're doing good work. I mean, if we quit doing good work, bets are off. But it has come to, I think having somebody like the National Science Foundation that has resources, their budget just continues to grow for funding that kind of stuff, I think they've now got the responsibility for doing that. It used to be that what you used to think were rock solid agency budgets, like the Forest Service budget, or like the state budget to support the Forest Research Lab [OSU COF] would be able, and should be, the places that provides the funding. I mean, we can barely keep the doors open now.

Geier: But, like you said, it does create a problem for some people.

Brown: It makes you very nervous. I mean, you can't count on that money, except from grant-to-grant. That's a very unnerving kind of position to be in. And we've got some young people, well they're now middle-aged people, over there, who've been living off of this kind of grant money for 10 or 15 years, and that's not a good thing to have. I just believe we need to be developing some kind of a funding base to keep them in a permanent position, but it isn't coming. The state [Oregon] here, at least, is not investing in that, and I don't see the feds doing much of that either.

Geier: Yeah, I'm kind of interested in the [circumstances] at work there, where you have people, a lot of stress involved, and the question is, what kind of person is, first of all, attracted to that position, and what kind of person stays there long-term? And some of those people, I guess, eventually move into permanent-funded positions, but not all of them, and sort of just hang out. I'm trying, this one person, the name is escaped me, but there are several examples of those leading scientists that just --

Brown: -- Yeah, Mark Harmon.

Geier: Yeah, that's the person I'm thinking of, actually.

Brown: Yeah, classic. This guy is just absolutely tremendous. We haven't had in our system, new positions we are able to offer under something called program improvement, or you have a retirement and can fill behind that retirement. Those are the two ways to do it. We have not had a program enhancement since 1987, because of the budget situation in the state of Oregon. Because we've had declining budgets, when we've had vacant positions, we quite often have not filled behind them, simply because we're catching up on the budget reduction. I mean, we used retirements or other vacancies as a means of avoiding having to fire someone. That's a hell of a way to manage a program. None of us like to do that, but that's basically the circumstance we've been in for a decade.

Geier: Do you think that there is relationship between putting that kind of pressure on people and the kind of cooperative effort that developed out there at the Andrews?

Brown: No. I guess I would never intentionally put that kind of pressure on people. This is a circumstance of the time and I regret it a great deal, because these folks have futures and they have families, and living from grant to grant is I think a very debilitating kind of thing, in terms of an outside source of pressure. Fortunately, people like Mark Harmon are such great scientists they can almost count, you know [Laughter], their soft money has become more reliable than our hard money, which if you want an anomaly, that's it. Because these guys have done such good research, and have established such a reputation, that I think they're in great position to continue funding and increasing the size of their funding base over time, whereas with the normal appropriated funds, the so-called hard dollars, we can't do that. If you want anomalies, that's the big one.

Geier: So the long-term focus works in their favor in that case, because the research is structured where, if you buy into the beginning with a grant, there's a reasonable expectation you're going to have to continue funding that in the future.

Brown: Yeah, well, there is some of that to be sure. But particularly again, where you're doing great work as they are, the agency loves to, that's the place and is a slam dunk for their investment. And you can give money to Mark Harmon, and you know that money is gonna get you something in the end, and something good. And so, the agencies are looking for people like that, I'm just sure they are to make those kinds of investments. But that doesn't take the pressure off of Mark. It means he's living, you know, kind of on the edge, wondering about the next grant. You can't help but worry about that stuff.

Geier: Kind of a critical element here as you pointed out with the IBP, a big chunk of funding coming in from a nucleus of activity at the Andrews, from regular faculty and then post-docs, and that kind of creates a nucleus for moving forward. But then, if understood you right, most of those people who are brought in, post-docs, became permanent appointees in the forest [Andrews] or some central figures anyway.

Brown: Yeah, that's right. That did happen, which is very unusual.

Geier: So, the soft money was a stimulus, but then there was this hard money to fall back on. And it's that later period when the LTER is formulated, in the long-term --

Brown: (Interrupting) -- Right, and there was an increasing program in those times.

Geier: Okay.

Brown: That was the other kind. They had some hard, appropriated funds in order to pick up those positions. Where they would not, they would just wave them good-bye.

Geier: So, the current situation, from '87 on, is very different from that earlier period, I guess is what I'm getting at.

Brown: Yes, exactly right. It certainly is, because in the early '80s and the mid '80s, there were some program expansions in federal agencies going on. So that, and the PNW Station, and I don't know this to be the case, but my sense is that the PNW Station was growing at a more rapid rate than some of the other stations were, in part because of the issues out here. This place has been the cauldron for forest policies, federal forest policies, particularly for 20 years.

Geier: Yeah, that's another issue I wanted to get into here, and move along here. I don't know what your time frame is like, we're about 2/3 of the way through, and then I'll get out of here. I wanted to talk a little bit about Jerry Franklin's move into leadership and then, eventually, out to the University of Washington. As I understand if I'm recalling this right, he left somewhere around '86, about the same time that you were coming in as Assistant Dean of Research, is that right?

Brown: Right.

Geier: Can you recall what was going on there?

Brown: No, I was never really privy to that. Jerry, by '86, had a long time in the Forest Service, it may have been close to 30 years, and I think he was looking for something else to do. Jerry's the best guy to talk to about that. We did not have a position here for him, they did at University of Washington, and so he made the move. But the particulars of that, I was not privy to.

Geier: Okay. I was curious if you had a reaction to that because he was so central to building up this, this secure element, and then in the '80s --

Brown: (Interrupting) -- But it's been really interesting. Jerry has stayed connected very well down here. In fact, he was here this week. I gave a lecture, in fact, the opening lecture for this IUFRO, or Uneven Aged Management Workshop. So, there's been a lot of on-going connection with him. That hasn't stopped.

Geier: Yeah, that, he was also instrumental in putting together the --

End of Side A, Tape 1 (of 1)

Begin Side B, Tape 1 (of 1)

Geier: -- He was also instrumental in putting up a joint administration agreement between the Forest Service and Oregon State University at the Andrews when Art McKee came in.

Brown: Yeah, right.

Geier: And I don't know, this was drafted in what, 1978? I think that is when that was.

Brown: Yeah, I guess I don't know the date on that, but I'm sure he had an important role to play in all that. He did some very creative things. There were those he helped put in place, a network of research natural areas around the state, a tremendous legacy.

Geier: How would you characterize, looking at that joint agreement between the university [OSU] and the Forest Service, it is very unusual you have the Forest Service property with a non-site director as an employee at the university. What are some of the problems associated with that, and how are they overcome?

Brown: Well, I guess you're going to have to talk to people that are more intimately involved in the day-to-day operation about that, if you want sort of the nitty-gritty of how those things occur, and are administered.

Geier: I've talked to Art about it, but I'm just curious from your standpoint.

Brown: From my standpoint? Let me give you sort of the big picture standpoint. The big picture standpoint is, I think this is a tremendous example of how we ought to be working together across organizational boundaries. Talk about examples of governmental efficiency, this is one. We all [OSU], and these guys, the other neat thing about the people that have been involved in this program, is that they don't like administration. Okay? That's my impression, and so they do everything they can to avoid having to be bound up in administrative hoopla, and they get on with the science. And the Forest Service and the university [OSU] have given them a lot of freedom to do that. So, that's what they do. They don't argue about boxes on an organizational chart, they don't worry about reporting lines, they don't worry about all these other kinds of oft-times tenacious, and contentious administrative issues. They just do the work, and they're committed to doing that. So they avoid a lot of the administrative garbage that plagues bureaucracies when they're trying to interact. They don't mess with that. I give them a great deal of credit for that style of operation. And of course, we have tried to minimize the number of hurdles and administrative hoopla things they've got to go through. So I think it's great. I think that ought to be the model of how organizations like ours interact.

Geier: But of course, there's the question of how they manage to do that. If you look at where they came from, you know, organizations that are fairly bureaucratic, the university and the Forest Service, many of those people can't do that in those organizations.

Brown: Yeah, true. But I think you had people on both ends of the administrative spectrum willing to allow this to happen, then you had Jerry Franklin who had a lot of credibility in the Forest Service, people had tremendous respect for him, and old 'Jer just went out there and did it (laughter), and talked these folks into it. And if you had a different personality involved, it may never have happened. But he had the tenacity and the organizational respect necessary to pull that off, and he did it.

Geier: And by organizational respect, you mean both within and outside of the organizations?

Brown: Yeah, but mostly there [Forest Service], because that's their facility and the federal government. You know, universities are, for all you think about organizational bureaucracy, we're a heck of a lot less bureaucratic in many ways, particularly when it comes to property things and interactive kinds of things, than a federal agency tends to be. So this was a real coup that Jerry could have pulled this off, and he did it within the organization.

Geier: Yeah, Jerry and Art have both pointed out that if they had tried to sit down and codify what they were doing, they probably couldn't have done it. It was a fact that, like you say, they were willing to go out and do this. What you're saying is, it's the kind of person, a certain kind of panache that you have to have, to carry it off.

Brown: That's right, exactly. Panache is the right word.

Geier: Well --

Brown: -- Brass is another word (Laughter).

Geier: Well, also as you pointed out, the critical point is that people at both agencies, or all the agencies involved including the forest [HJA], need to be willing to let them make that move, so I want to ask you in your working with PNW Station, who are some of the people up there who have had some of that kind of characteristic that you can take off?

Brown: You mean administratively?

Geier: Yeah, administratively.

Brown: We've had a great series of station directors up there [PNW Station]. While all this stuff was going on, you had people like Bob Buckman, Bob Tarrant, Bob Ethington, the three Bobs, and Charlie Philpot. And Tom Mills now. We find him a great guy to work with, but he kind of came after all this stuff has already occurred, but these guys were all in there, sort of fueling the flame, if you will. And they were the kinds of people at that end that were willing to allow these kinds of arrangements to go forward, and applauded them. All three of the Bobs and Charlie, did that in great style. They were, they were just super to have. So that's, that's the 30 years.

Geier: Yeah, so in other words, right at the top, it's the station director level that was really critical there.

Brown: Yeah, you bet.

Geier: Okay. In terms of your role in relation to that, being here [OSU], who have you been closely involved with at the station?

Brown: Well, I guess my role and interactions are primarily with the director and their staff. Although I interact a lot with the guys here, just because they're doing some interesting stuff and they're fun to interact with. Fred [Swanson] and Jim Sedell; I have had not that much contact with Herman Gucinski, but Logan Norris has. Almost a day-to-day kind of thing. But my interaction has been primarily with the station directors, Charlie Philpot and now Tom [Mills].

Geier: Has the success of this program affected the kinds of faculty that you go out and try and recruit for the university program here?

Brown: Oh, I'm sure it does. Most of the work is concentrated in forest science, okay. And because of that, that is kind of our "forest biology" department. I think clearly it has. As I mentioned to you, we have not filled any new positions for a long time, given our situation. But the last one we did, the one I told you about, in 1987, we had a program enhancement and used that money in long-term productivity and for Phil Sollins, again one of the people that was on soft money working on the Andrews, who was moved into the permanent position. So I think if you talk to Logan [Norris], and I suspect you will, he'll tell you that you need people that are going to be able to work together, and can work in a sort of a systems environment, and that are willing to really be able to function and communicate in a very high energy team.

Geier: Can you think of any examples of people who've started out in that direction and somehow it didn't quite pan out?

Brown: I'm sure there have been, but none come to mind immediately.

Geier: Let's back up a minute here. I wanted to also get a handle here on your level of interaction, as dean here, with forest managers in the Willamette National Forest and industrial leaders who work with the Willamette National Forest, and how this initiative on the Andrews affects that relationship.

Brown: I don't think it does. We've always had a lot of interaction with the Willamette Forest supervisors; Mike Kerrick, and now Darryl Kenops, who makes a great point of stopping in from time-to-time, and I see him at professional meetings, he's very active as is Mike, in the Society of American Foresters. So there's a lot of that kind of

interaction with Darryl. Darryl works hard to keep us up-to-date on what's going on the Willamette, which is a place of great contention. But I don't think it's affected our working relationships, other than, it's a common thing, an interest that we have. The forest supervisors are interested in what's going on at the Andrews, as I am, and it's a common topic of conversation when we get together.

Geier: I guess what I'm thinking of is the implications of this kind of research for issues like the spotted owl controversy, and the impact it might have on the university's relationship with its alumni and owners and other things.

Brown: No, I don't think so. There, you know, this doesn't mean that the results or the applications of results haven't been contentious. They have been, and there's been a lot of interaction about that. But I think it's provided, a good opportunity for a lot of dialogue. Now some of that dialogue is very heated, mind you, but so far, the dialogue has been civil. And we've had people raising questions about some research results, and I think that's good; that's what science is about. I mean, if we were all sort of sitting back with our hands folded demurely, I think we wouldn't be doing our job as scientists.

Geier: Can you give us an example of some people who have raised those kinds of questions?

Brown: Yeah. The issue of Jerry Franklin, you may know, well, maybe you don't. He was taking the research results off the Andrews, and was and has continued to do so, sort of extrapolate them to what he thinks this means in terms of management. There was a different point-of-view by one of our department heads, Bill Atkinson, who is now retired from Forest Engineering. Bill was not an engineer, but he was a silviculturist, and he was raising some real concerns about if we are we ready to go from the stand and small basin studies, to the landscape level. And these were some very heated debates. But I think legitimate ones, in terms of saying, well, are we ready to do this at the landscape level, kind of carte blanche, by the agency, before we'd begun to make the next step or the next investment in research that would go from the stand level and plot level, to a much broader scale. So yeah, there've been those kinds of debates and discussions. We've got one right now going on about the impact of timber harvesting on floods. Gordon Reeves [Gordon Grant, actually] and Julia Jones wrote a paper in which they hypothesize or contend that timber harvesting and road construction increases floods. Now our hydrologists look at the same data and say your data doesn't show that, in fact, it shows just the opposite of what you contend. And so there is a debate scientifically about what this same set of information means. Well, that is great, I think that's super. So long as that debate is done civilly and professionally, and this is what we really ought to be about.

Geier: Can you think of any examples of that kind of a debate broke open in terms of people involved with the Andrews and then led to some kind of a re-synthesis, or -- ?

Brown: -- A what?

Geier: A reevaluation or a synthesis that kind of grew out of that dispute, in other words?

Brown: Well, I think this hydrology one that's going on right now is going to cause there to be a reevaluation. There's been some other hydrological questions, giving you, as the hydrologist, giving you some hydrology link. Dennis Harr looked at some issues about the impact of harvesting on flood flows from rain-on-snow events in the transient snow zone. Dennis raised some questions; does timber harvesting, or does it not, influence the size of the peak flows from those events? In my view, this work was never really able to demonstrate that one way or the other, but again, our hydrologist looked at the same information and said, we don't see that being able to be defined, or definitively proven. And I think people have relooked at that as, at least saying well, do we know or don't we know, and the answer is probably not. So there are those, and I suspect there are some of those going on, biologically as well, but I'm not attuned enough at that to tell you.

(Nicole Duncum begins Transcribing from this point on the tape; also seems to be break in recording/transcript, making subjects and commentary discontinuous).

Geier: I was curious, things like large woody debris.

Brown: Oh, the large woody debris thing. Absolutely! I misunderstood the question. A lot of the Andrews work has caused people to look at things differently. I thought you were asking if there were scientific issues.

Geier: Well, that too.

Brown: I gave you a couple of examples of those, but the idea of looking at the world in a different way, a host of things have come out of the Andrews as a result of that. The whole idea of large wood in streams first, then large wood terrestrially on the land, the idea of legacy stuff. The whole idea of wildlife leave trees or legacy trees; that was a whole shift in the way people were looking at these issues, and the biggest one is to elevate the thinking about the forest in terms of a landscape scale. Because our focus in this country traditionally was on stands. Now, all of a sudden these guys down there started raising these questions about landscape-scale phenomenon. And that has changed really the way a lot of people have looked at the forest now. All of a sudden ecosystem management is the buzz word of choice but what ecosystem management means is we're going to look at things in a much broader context, because water and wildlife, they don't operate as stands, they operate in a much bigger system. Now, I think this is one of those things that this has been ultimately the thing that has gotten people to focus on.

Geier: I'm trying to remember talking to you, you talking about taking some industry leaders up into the Andrews on a tour and showing the large woody debris. I think it was Stub Stewart -

Brown: Yeah, it was Educator's Day. Remember the trip?

Geier: Yeah, were you there?

Brown: Yeah, yeah.

Geier: Parts of that were part a revelation or quite a break-through.

Brown: Well, there were a number of those. You know, the issue of large woody debris in streams, was an interesting one as well. Back in the 70's, the fisheries people, particularly in the coast, were paranoid about fish blockage and blocking the migration streams, and there were some hellacious log jams over there that gave them pause for that. But as often happens in bureaucracies, they made this kind of one-size-fits-all prescription, and said, "Okay, let's get all that wood out of the creek so the salmon and steelhead can run up the rivers," without thinking very much in a systems way again, about what this stuff was doing. So we had people doing bits and pieces of that a lot on the Andrews, by our faculty and by the Forest Service. And these pushy post-docs like Sedell and Swanson, and over coffee one time, we got to kind of comparing notes about, kind of a little brown-bagger thing, what are we finding out from all this work we're doing? Well, the overwhelming message was this stuff is critically important to the health of streams and habitat for fish and wildlife. So, we said, "What are we going to do about it." Well, I volunteered to host, and this was when I was department head for Forest Engineering. I volunteered to host a workshop on woody debris in streams. And these guys did all the work, all I did was get up and introduce all the people. We imported some experts from afar, guys by the names of Ken Cummins and Robin Vannote. They were aquatic ecologists of the first order, and not only that, they had an able to talk to lay people about what they were doing in their science.

Geier: Where were they from?

Brown: I don't know. Both of them were from the East, and I can't remember where Cummins is from, well, I can't remember where either one of them are from. But they came because Jim Sedell knew them, and we hosted this marvelous workshop. We called it "logging debris in streams," and that was kind of a macro-rebellion because what we were going to tell these folks this material in the streams is good stuff, leave it there. Don't jerk all this stuff out because the fisheries guys were requiring the loggers not only to pull the stuff that fell in the creeks and pull it out, they were requiring that while you were down there, hand clean all the debris that's in the stream and get it out. So, these guys were spending enormous amounts of money and energy pulling out old logs and yarding them up on the banks. So you "whistle clean" these streams, and you

went from a pool-riffle system to a riffle system. Well, it was very contentious, and the fisheries guys were enraged. Then over time, the evidence, the preponderance of evidence and good scientific work by all these people, got people to finally rethink this whole idea, and the same thing is happening about the wood on the landscape. The old wood there and implications of nutrient additions, the idea of habitat for a lot of critters, just on and on. So those things were again very important about getting people to think differently.

Geier: Can you think of any examples of people who started out being resistant and then - [changed]?

Brown: Yeah! In fact, I won't share the name with you, but at that meeting, the workshop we had, we had a guy who was at that time, he worked for the Fish Commission, and these were the people responsible for the commercial fisheries. And they crossed over with the [Oregon] Game Commission on salmon. But this guy came up to me, shook his fist in my face, and cursed me for having just ruined 20 years of his work, and I said, you may want to think about whether during those 20 years you were doing the right thing. I thought he was going to hit me, I really did. He then left the Fish Commission and as a fisheries biologist, and joined the Forest Service on one of our large national forests, and I saw a notification in the paper that he had received an award for his fish habitat restoration work, particularly for the role he had played in bringing more large woody debris back into the channels. I saw that and it made my day, because this guy, had made a 180, and he'd been recognized for how well he did this.

Geier: Yeah, that's something I've run across in the course of this research. I was also looking at Alaska a couple of years ago and people had been doing research believing that what they were doing was right, and then there were major paradigm shifts, and suddenly they found people questioning and challenging them, and they took it very personally.

Brown: Yeah, and I think we kind of get past that, and it seems to me that this is why it is so important when we put science out for public view; that shows willingness by professionals to take those kinds of challenges, and take them not as a personal affront. That's hard to do when you put body and soul into this. You collected data through thick and thin, you've written this down, and signed your name to it. It's you. But to be able to step back and take challenges in a professionally objective way, we don't do a good enough job, in my view, of teaching our young scientists about the importance of scientific debate and how to engage in that in a way that is professional and is civil and is positively constructive. And I just think, when we take it personally, I think we've missed the point. And I think we need you to know if your research will survive rigorous challenges, which can strengthen the conclusions. I learned that in "Logic in the Scientific Method" [class] as a student in Colorado State. So I think we don't teach our students to do that very well, which is part of the British system. The idea of British

debate; it's scathing as they get up and wail away at one another. It's kind of like lawyers debating in a court case, and once that's done they walk out of the court room and can go have a beer with one another. We ought to be able to do the same, mind you.

Geier: Is there a public relations component also in what the Andrew's group has been able to do has made them successful?

Brown: Yeah, they have. There's always a danger in the public relations point-of-view that sometimes you can release information before it is really ready. But the good thing that they have done there I think, has been to really share their science with a huge number of people, particularly managers. Okay, it's this idea that you talked about a minute ago. You take people from the forest industry, and you show them the importance of what you are doing to maintain the productivity of their sites. I mean that's a powerful message. These guys, contrary to popular opinion, are not the rape, pillage, burn, cut-up and get-out folks. They are in the business for a lifetime, for generations, and they want to maintain the viability and productivity of that land. So, the Andrews has been a place where they've talked about those kinds of things. They've also excited a lot of lay people about that, and have done a marvelous job of bringing in students from NSF-sponsored programs, many of them minority students, who have gotten pumped up about science.

They've done a bunch of those kind of ancillary things that have been really important, and done a great job politically. I was on a trip in which we went walking through the Andrews with Senator Hatfield and saw our first spotted owl, his first too, on that trip. The Senator, Congressman AuCoin and others that have been supportive of the program, have really gotten pumped up about this. And in part they've been pumped up because of the partnership with the National Forest system. I mean, it's not just an isolated research project on those trips, Lynn Burditt or Steve Eubanks applying science on the rest of his or her district. And that makes a huge impression, because people like Hatfield want to see the kinds of research investments that are being made to payoff in terms of actual practice, and programs like the Andrews is a classic example of where that occurs.

Geier: Just to divulge on this trip with Hatfield. Who was, aside from yourself, who were the scientists who were on the trip?

Brown: Oh, just the whole "hee-haw" gang. I mean Art McKee, Fred Swanson, and Mark Harmon. We were in Harmon's long-term log decay study when the owl joined us, so it was one of the Senator's natural resource assistants, who there with, probably 10 or 15 people total; two van loads.

Geier: A good example of the cooperative element is that you always keep walking the forest together. Hatfield, as I recall, and AuCoin were instrumental in bringing in the funding for the facilities.

Brown: Oh, yes, right. They were both in appropriations and AuCoin really noticed these guys were living out of these rummy trailers. I mean, they had all these third-hand trailers up there on the present site, and they took him up and showed him that. I don't know whether he or Swanson was the one that coined the term "ghetto in the meadow," but he was very impressed about the work they've done, and saw the need for new facilities.

And so that's what brought them the marvelous campus up there with the new buildings.

Geier: Oregon State University has some mandate to extension work, and I guess one element of that would be to bring home the information to local communities. I was just curious if there was anything like that with the Andrews that you are aware of.

Brown: Well, they've got this Cascade Center [for Ecosystem Management], for learning. I can't remember the name of it, but they have taken it upon themselves to do a lot more educational stuff through the Andrews with the scientists they've got up there, and I think those folks are committed to that. I just am amazed at the number of visitors they have up there, and that come up there on a regular basis. Art and Fred can tell you in detail how many they get, but it's a huge number of people that come through there, and it happens because these guys are committed to telling the story about what they find. It's just not we're going to write a bunch of scientific papers and go to AAAS and Ecological Society of America (ESA) meetings, give our papers, and that's that. These guys are interested in sharing the information they've got with a whole host of folks.

Geier: I gather from what you said earlier at different times and different ways, that you see this as a model for the way things ought to be done. I guess the million-dollar question is, "Is it a viable possibility that could become a model on a broader scale, or as you said, there are unique circumstances that led to this at the Andrews."

Brown: Yes, there are. The Andrews is a kind of a facility-focused activity. I mean, it is far greater and far broader, don't get me wrong, as not everything they do is within the boundaries of the Andrews Experimental Forest. But this is a very-focused program and the Andrews plays a central role in the long-term funding pattern that has come. You asked a minute ago about how this program had influenced our thinking about how to do research, and I say it is a clear example of the importance of integrated, interdisciplinary research, which has produced a big payoff as a result of that. It's the "whole is bigger than the sum of the parts" kind of thing. We have subsequently had two other integrated programs that have not been as site-focused as the Andrews, but nonetheless played off of this idea. We have some of the same characters involved in

doing research in a program in southwest Oregon on reforestation called the “FIR” program [Forestry Intensive Research]. A lot of these same people now have this same teamwork mentality going to work on the system of reforestation in a harsh site in the kind of topography found in southwest Oregon. And currently, a program on the coast called COPE, the “Coastal Oregon Productivity Enhancement” program, plays off the same idea of integrated, interdisciplinary research. Again, great stuff coming out of that program, and a lot of the same characters involved on the Andrews are involved in these two programs as well.

Geier: So what you are saying is that the snow ball effect is picking up?

Brown: Yeah, it is, and it is a sort of a mental construct about how you can do research most effectively.

Geier: Once that mental construct begins to sink in, it will be more viable.

Brown: It becomes a habit, then it’s the way we do business.

Geier: So, do you see that as having potentially the power to change the mind-set of the Forest Service, for example, and surrounding areas that’s probably beyond the scope of the university?

Brown: Well, yeah it is. But I think very clearly I see it is as a wonderful example, for whomever, Forest Service, university, you name it, as a way of doing successful research, and here is a living example of something we often talk about only theoretically.

Geier: Well, to bring it back a little closer to home here, in talking with Jerry Franklin, who obviously had some personal reasons for leaving Oregon State University as well as professional ones, he had a little bit of a falling out I think with Carl Stoltenberg, who as I understand, you were fairly close to. I was wondering if you could tell me a little bit, just for context here, really some of the ways in which you would see your vision as dean here, either following his footsteps or marking out new territory. What are some your similarities and differences with him in terms of priorities and goals?

Brown: And again, I don’t know the context of the Jerry Franklin-Carl Stoltenberg interaction, and that’s not one that I care to know about. I mean those are between two people. But Carl was a great dean. He was dean here for 22 years, and in that time, he really saw the explosion of science in this college go on. And he was very much a statesman. This is the guy who served as chairman of the Oregon State Board of Forestry longer than anybody before or since, who was president of the Society of American Foresters, and who was probably the most respected Dean on the campus. Just a tremendous individual. He was a great role model in many ways for me because he appointed me as department head over the objection of a lot of folks, because I was

a hydrologist taking over the reigns of what had been at one time called the “logging engineering” department. He took a real risk, took a lot of heat, so he was a guy that would stick by his principles, and had a tremendous amount of personal integrity. I also appreciated the style of management that he had in which he pretty much let the department heads run their departments. He was not a micromanager and I surely hope I am not, but he was a guy that would let you take the bit in your teeth and run with it, and as a result of that, a host of folks did. Dick Waring did, but he didn’t micromanage Dick with the IBP stuff, didn’t micromanage me as a department head, and I think that was a great thing. We’ve had to deal with different sets of problems and the problems I have faced budget-wise were different than ones than the ones he faced because the State of Oregon has continued to disinvest in higher education.

Geier: How so?

Brown: We all have a different kind of personal style in the way we do stuff, but again, I try not to micromanage the departments. We have a lot of great faculty here that we have given a good deal of reign and rope to, they’ve responded marvelously to that, and we’ve just seen tremendous things happen. The growth has continued and I marvel at it. I watch as our faculty continues with fewer and fewer appropriated dollars to gather more and more outside grant money. I keep thinking, “My God, this can’t continue,” but the reputation of this faculty is such and the quality of the work they do is so high, that it just keeps growing. We are the number one forestry research program among universities in the country in terms of outside grant support. We’re 14th in terms of state support. So this is a great place to be and we’ve done some things here, things I’ve tried to do, to get us involved more in policy-level issues. That’s been easy to do because the explosion that has occurred as a result of the Northwest Forest Plan and the implications of that, but we’ve had people take a tremendous amount of leadership in responding to those and they’ve done those really well. We’ve taken our own research forest and put in place a long-term plan for that, which I think made it more of a research forest than it was before, and that’s an ongoing evolution. I see that as a kind of work in progress. The big fight has been in holding the place together. It’s like fighting a rear-guard action as the resources have continued to dwindle.

Geier: You mentioned fundraising as being more vital.

Brown: Yeah, outside fundraising is something Carl didn’t really need to do in the same way we’ve had to do. I spend a tremendous amount of time at that. This building [Peavy Hall] was built with state funds, that building that’s going into construction right now [Richardson Hall], is going to be built with 10 million dollars of federal funds, 14 million dollars of private funds, and so a huge part of my days involves fund-raising stuff, and I think it’s going to get worse rather than better. I don’t see the State of Oregon coming to our aid in any foreseeable future. I mean, hell, if we are in the middle of an economic boom as we are now, and we can’t get enough money to run the universities, what’s it going to be when we have an economic downturn, and we will? That’s scary.

Geier: I'm curious about fundraising. You likely know there are major donors likely to be turned off or turned on by what's going on at the Andrews? Do you think?

Brown: At the Andrews?

Geier: The kind of research that's going on there.

Brown: Nah, I don't think it makes a difference.

Geier: Don't pay much attention to it?

Brown: Well, no. I think they pay attention to it, but I don't think people have the right idea. They get the impression that industry is very vindictive and that they're watching over us closely. Every time we talk, I go in public, and people ask questions like, how is your research influenced by the fact that you get this harvest tax money? And the answer is none at all. The industry has never in my career come here and raised hell with the college. Oh, they raise hell with the college because they don't like something, a research result that doesn't meet their preconceived notions, but they've never been vindictive about that, they've never come at us and said, we're going to cut your budget because of what those yo-yos on the Andrews are doing. That's never ever happened. Neither has it happened where they say, "Look, we want you guys to prove x, y, or, z." They've not coming at us with that. They've said, we want you to do more research in fish and wildlife habitat, because these are key issues for us, but they've never said we want you to prove this or we want you to come up with this research result. Never had that happen.

The money we get in harvest tax comes to us in a lump from the state, and we have no idea who paid how much. They send us a check quarterly, I send the money to the department heads mixed with other funds, so they haven't a clue and the faculty even less of a clue where their appropriated funds come from. They see a mix of harvest tax, general fund, and McIntire-Stennis money. You just get a dollar and we worry about the bookkeeping in here. So no, that doesn't influence them. If there is research they don't like, they let me know about it, or ask why in the hell is so-and-so doing or saying these kinds of things. I get them calmed down and say, talk to the scientist. Quite often where they hear about it is in the newspapers, which are inaccurately reported in many cases. Had a case of that not long ago. But they've not been vindictive about that at all. I mean, we're collecting money right now for the building from a host of large and small companies. They see this place as a very important place and they're not going be vindictive about that.

Geier: I've talked to scientists and there's an interesting issue to address here. Correct me if I'm wrong. My understanding is that the fundraising for the College of Forestry is the highest in the university, and it's been going up recently. At the same time the

Andrews and the people at the Andrews, have been getting into research that is highly controversial, and challenging a lot of what forestry has done, including some of these large donors or their companies. So, there is a seeming paradox there – it sounds like you feel comfortable with telling them that they can go and talk to the scientists, knowing the scientists will be able to communicate with them. Isn't this unusual?

Brown: Probably. I mean we have some remarkable people here. This ain't your average dime store forestry school. And they're mature, and they're by and large, people who communicate well. The other thing is that they that they do their work well, and so when they come up with research results, they've got a basis for saying whatever it is they say, and you know it's the business of incontrovertible evidence. You may not like the results, but you're going to have a hell of a time, what number did you have that were bitter, that it's that kind of a thing. Some of these things may fly in the face of commonly accepted knowledge, and all of that, but no, they are able to make their case.

Geier: Can you think of an example of someone who raised a question that you directed to the scientist, and they were able to bring them back on board or resolve their concerns?

Brown: Well, it's happened a number of times, but at this moment late in the afternoon, I can't dredge up an example. There is one, and this doesn't have to do with Andrews research.

Geier: I thought I would let you off the hook a little bit on this question. What I'm really interested in here is how scientists perceive that kind of interaction and how it relates to how they perceive their mission on the Andrews. Can you think of any scientists that to whom you've sent people on occasion talk about the research, some good examples of people who are good communicators and successful at helping with the donors like that?

(Side B. 48.6 to 60.0)

Brown: Hmm.

Geier: People that have been involved in the Andrews is what I'm talking about.

Brown: People in the Andrews? Well, I can't think of a specific person. We've had a lot of folks down to the Andrews, we've had, this educator team/educator day program, which included a significant number of CEOs. We've had the OSU Foundation, and the Council of Regents. These are the big, big donors for the university, not just for the college. They had a day-long field trip down there and they were just blown away by what was going on. We had these, and most were elderly people, and I was a bit aghast, because the Andrews team was sort of tripping these guys. I kept thinking, some of

those old people are going to break if they fall! But they were just really turned on by what they saw down there.

Geier: Do you know roughly when that was?

Brown: It's been a couple of years ago. Maybe three summers ago.

Geier: I'll check with Fred [Swanson].

Brown: Yeah, he'll know when it was. But those have been very positive kinds of experiences, and we do interact with donors, not necessarily with Andrews' people, but we do get faculty in touch with potential donor people. The most recent one I recall was Steve Strauss, one of our Forest Geneticists, but it happens all the time depending on what the donors' interests are. And I think Art was right, Stub Stewart, who has been a major donor to the university, was really intrigued by what was going on down there and this whole idea of large wood and stuff [leaving woody debris on land], which just really got him to thinking; he's a unique character. He's a guy that's in his mid-eighties now, and he was a CEO in the Bohemia [Logging] Company before they sold that to Willamette Industries. But Stub regularly goes on these science adventure trips, the kinds of things where they'll take small boats, and they'll go to the Galapagos, or they'll take a small boat up the Amazon and get you into a zodiac and run you up some jungle stream. I mean, he enjoyed that kind of stuff, so he was really intrigued, as others were.

Geier: Would he be good to talk to about this?

Brown: No, I don't think so. You'd have a hard getting a hold of him to do it. But, again, it was because of who he was. He was also Chair of the Forest Research Lab Advisory Committee. So he has this kind of proclivity for forest science stuff.

Geier: Art said that he had an experience with him up there on one of these trips, and he kind of pigeon-holed him and talked to him.

Brown: Yeah, exactly. I know, he's a great guy.

Geier: Can you think of perhaps somebody else, a donor that might be interested and involved, someone I could talk to.

Brown: None come to mind just concerning a specific location [Andrews]. We have a lot of donors, obviously, but it's a more generic interest in forestry than just focused on the Andrews. Stub's focus was not on the Andrews. The dollars he has given have been for forest genetics and a number of other projects on the campus, but not specifically Andrews-related. But none come to mind that are sort of an Andrews-focused issue.

Geier: Well, we've got the Andrews, you don't have to tell me right now but if you think of something or somebody let me know.

Brown: I don't understand what you're after.

Geier: I think what I'm looking for is someone who I could talk to who would be interested in the programs at Oregon State University who would be conversant in the science that is taking place.

Brown: Yeah, I think the zinger is, conversant in the science that's taken place. I think most of our donors are not what I would call conversant in the science. They tend to give to us because they know we do good work kind of in general. A lot of them are interested in undergraduate education as much as they are in science. Most of them couldn't tell you specifically what's going on at the Andrews versus other places. And I think that would be the case for even for people like Stub Stewart, who kind of keep in touch with what's going on in forestry. And I think that's probably a good thing, that is to say, we do not have the Andrews over here, and then the rest of the forestry program. It's all kind of woven together. And so being able to find someone who is, would be specifically knowledgeable about that kind of research program, we probably aren't going to find it. Most of our donors are elderly people, I mean they're at that point in their lives where they've got significant resources to share, and they just don't keep track of that stuff.

Geier: Well, I was just curious. It would be helpful if I could get a great deal of talk about the Andrews about the communication efforts, the interagency cooperation, and people I could talk to. I've interviewed Mike Kerrick, I could talk to Bob Tarrant, I've talked to you and others. One of the key elements here is what the people at the Andrews have tried to do, to come up with kind of a paradigm for real world management that's not exclusive of timber production. And you hopefully get that a perspective of that from the standpoint of someone that's evolved in the industry and hasn't been close to the college for a while, not necessarily the Andrews, but just in general terms of a perspective of what's going on.

Brown: I think the problem is, identification of that with the Andrews, enough knowledge about what's going on at the Andrews, to be able to relate that in any kind of definitive way. We've got a lot of people in the industry who are very knowledgeable about forestry, obviously, but I doubt that even they would sort of be able to say, oh yes, this is something that came out of there. I don't think they'd be able to do that.

Geier: We're getting along here in time, but I was curious if you had any perspective of how what's been going on at the Andrews with Oregon State University and the Forest Service, and whether that has changed expectations among your peers or other institutions, of what to expect from an experimental forest?

Brown: No, I doubt that. I'm not sure that other colleges, certainly the University of Washington is well attuned to what we're doing, and there will be other places as well, but as a college kind of thing. Most of the college forests tend to be small, underfunded, and are not nearly heavily utilized as this one is. You are kind of on your own hook, if you will, for resources to make the management occur. Certainly that's the way it is in the West, as sometimes they're quite remote from where the college is headquartered. I mean, it is unusual to have a research forest right next door like we've got here.

Geier: Probably within an hour-and-a-half drive down to it.

Brown: Well, a lot of them are really an hour-and-a-half, but they're really not, because they're an hour-and-a-half and they don't take students to them on a frequent basis. And they don't have the kind of research facility that you've got down there because this one obviously came from federal origins, and the rest of us have to scrounge from pillar-to-post to keep a program like that going.

Geier: Yeah, for example, at Cascade Head Experimental Forest.

Brown: Yeah, right. Well, Cascade Head is nowhere near what the Andrews is. I mean, it's just kind of a small, satellite place.

Geier: Although it's interesting many of the people at the Andrews have worked there.

Brown: Oh, yeah, right. Now don't get me wrong. I'm not trying to denigrate that, but as a facility it's not got near what this one's got.

Geier: But, students are taken down to the Andrews a great deal, although it is an hour-and-a-half away. It's kind of attracted people.

Brown: Yeah, but they go down there kind of special stuff for very long kind of full day field trips. What we have here on our research forest [McDonald-Dunn] is a chance for students to go up there for a lab. So they're up there in twenty minutes, do their lab for an hour-and-a-half, and come back. You can't do that in most places. We have a lot of student traffic down there, don't get me wrong, and they tend to be Saturday trips.

Geier: Well, you've been very patient with me.

End of Interview—Tape ends