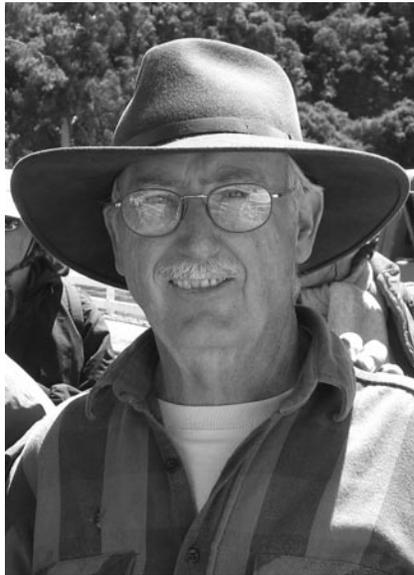


# Oral History Interview with Dr. Lyndal Laughrin

University of California Santa Barbara  
Natural Reserve System  
Santa Cruz Island Reserve



May 6-9, 2011

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Edited transcript of recordings totaling six hours, 38 minutes

Funded by

Channel Islands National Park  
Ventura, California

Santa Cruz Island Foundation  
Santa Barbara, California

**Background:** Dr. Laughrin is the long-time resident director of the Santa Cruz Island Reserve, the largest unit of the University of California Reserve System. The reserve encompasses about 48,000 acres of land owned by The Nature Conservancy on 64,000-acre Santa Cruz Island in Santa Barbara County, and operates out of a field station in the island's Central Valley near the island's historic "Main Ranch" complex.

Dr. Laughrin became familiar with the island and field station as a UC Santa Barbara student in 1965. He was hired as the field station's director in 1970. In this interview, accomplished over a period of four days in the field station library and comprising six hours and 38 minutes of digital recording time, he provides basic personal information; his history as site manager at the field station as well as its operation; a narrative of activities on the island during Dr. Carey Stanton's ownership, including details about the ranching period; and his observations of the natural and cultural history of Santa Cruz Island.

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**Note:** Text in [brackets] is editorial commentary or clarification. The original transcript by Verbalink.com of Santa Monica has been checked for accuracy and lightly edited by the interviewer. The transcript was then further edited and approved by the interviewee. This edited transcript is the interview of record. Archival copies of the original digital recordings are deposited in the archives at Channel Islands National Park and the Santa Cruz Island Foundation, and are subject to certain restrictions.

Audio file 1, Friday afternoon, May 6, 2011:

*Dewey Livingston:* This is an oral history interview with Dr. Lyndal Laughrin, the longtime resident director of the Santa Cruz Island Reserve under the auspices of University of California, and, specifically, UCSB.

The recorded interview is being done under contract with Channel Islands National Park and the Santa Cruz Island Foundation. It's May 6<sup>th</sup>, 2011. The interviewer is Dewey Livingston, and we're here in the library at the field station on the island. And we'll break this interview into three sections: personal information; the field station; and your memories and knowledge of island ownership, management, and activities, especially at Carey Stanton's last years and the subsequent transitions, including The Nature Conservatory and National Park Service.

So to begin, and this is our one formality here, could you say your name and spell your name, and your date of birth, please.

*Lyndal Laughrin:* Lyndal Laughrin. That's L-Y-N-D-A-L. Laughrin is L-A-U-G-H-R-I-N [*pronounced Lohr-in*]. And June 29<sup>th</sup>, 1943 would be my start up date.

*Dewey Livingston:* Could you provide some basic information briefly about your ancestry and your parents?

*Lyndal Laughrin:* My father's side, from the name, obviously, I'm probably Scotch/Irish origin. He grew up in the Imperial Valley, Brawley Area, actually born in Oklahoma. And I think going back far enough, the name might have been McLaughrin [*McLachlan ?*], as is often with the GH pronunciation in English, it is hard and soft. It probably had the "Mc" with the Laughrin part, and somehow they lost the Mc.

And so, I spent my years in grammar school answering to "Loffrin" and "Laffrin," and most people started there and never got to Laughrin, unless you told them a typical English word like "through", where the "gh" doesn't come out enunciated. On my mother's side, pretty much English and Scotch, Manning was their original name, and she came from North Dakota and Montana.

My dad met my mom down in the Big Sur area. He was basically a horseman most of his life and ran the riding stables at the state park, and she was the camp director for the Girl Scout camp there, and they got married. I was actually born in the hospital in Monterey. Apparently, the exciting story was that, it being during the war (WWII), and my mom said she was ready to have the kid, and they had to take her to the hospital in Monterey and had to drive up the coast with their lights on in the dark.

And the highway patrol stopped them because they were in the middle of a blackout because some Japanese submarines were lurking offshore close by, obviously. They pulled them over and got the story and said, "Well, okay, follow me," and took them up the hospital there

in Monterey. Later, my mom convinced my dad that they should try to move to Montana, and they went up there, but my dad, growing up in Brawley, spent one winter in Montana and said, “Sorry, this don’t cut it.”

They compromised on Salinas, and that’s where I grew up. Did my grammar school, high school, and two years of junior college (Hartnell College) in Salinas, and then eventually transferred from there to UC Santa Barbara in 1963, and did the rest of my whole academic career there, and I’m working for them still, [*laughter*], to the present day.

*Dewey Livingston:* You must have enjoyed being in the system there. So when you were in high school, for instance, earlier in your education, what might have inspired you to get into your main subjects in university?

*Lyndal Laughrin:* We grew up and lived out in the rural part of the Salinas. We never really lived on a very big farm, a couple acres, but we always had livestock, animals, horses, out in the countryside where we could basically just walk out the backyard and chase birds with your bow and arrows and hike in the creeks, and I was in Boy Scouts and outdoors camping, and we always went down to Big Sur in the summer and camped. So somehow that instilled an affinity for the outdoors and animals.

And I think I recall in grammar school, my favorite classes were kind of the biology-related types of things. And in high school, I still preferred that. At junior college, we’d go over to Monterey a lot, Pacific Grove, and I had a pretty good invertebrate zoology teacher, and he sort of pointed me pretty directly towards marine biology.

When I transferred to Santa Barbara, I got mixed up with the birdwatcher types, instead, and kind of took a right-hand turn there and basically ended up doing small mammals and birds as my graduate work.

*Dewey Livingston:* Who was that up in Monterey that inspired you?

*Lyndal Laughrin:* His name was Howard Feder.

*Dewey Livingston:* How do you spell that?

*Lyndal Laughrin:* F-E-D-E-R. And he taught zoology and invertebrate biology there. And I think he later moved up to the University of Alaska in Fairbanks. He was teaching there for a while, and I lost track of him.

*Dewey Livingston:* Could you tell me a little something about your career, so to speak, at UCSB when you were a student there?

*Lyndal Laughrin:* I came in as junior from junior college, and decided I wanted to be a biology major. At that time – this was before the kind of cellular and organismal biology split – they had a major there available called field biology, so the two choices were analytical biology and physiology stuff and field biology. So I got into that. And ended up with a

professor that I felt would be a good possibility for graduate work with. Her name was Dr. Mary Erickson.

And so I decided to stay there and do my master's, worked on mockingbirds, actually, territorial behavior and interactions. Worked right on campus with a whole suite of banded birds that we had there: marked on their territories. At the very end of my master's degree, they started this program out here on the island. And I had the opportunity to come out just for a short visit during that summer.

At that point, I was not really knowing where I was going academically. I didn't have a burning desire to become a university professor. I thought I'd end up teaching, maybe, at a junior college or a state college or working as a research person with something like Cal Fish and Game. So as I finished my master's, I kind of had an introduction to the island.

They had actually started the program out here in 1966 and had the opportunity for classes to come and visit. So as a graduate student, I got to be a TA for some of the field classes, and brought classes out here. I decided the little island fox would be an interesting animal to look at because basically not much had been done except descriptive work, describing the species, that kind of thing.

If you're in the academic world, they don't really encourage you to stay in the same place to do all your education. So, when I thought about it, well, I have done my BA and my master's now at UC Santa Barbara and should move on; but, financially, I really had to stay within the UC system, and kind of the two best options would be UCLA or UC Berkley. And I really didn't want to move to L.A. coming from a country background, rural in Salinas, Santa Barbara was a pretty big step up, and going to L.A. was not really interesting. And I didn't really want to go up to Berkley and commute all the way down here to do fieldwork. So, the path of least resistance was just to stay at Santa Barbara. I already had guaranteed funding and research assistance and a TA job, so I decided to stay there and do the fox work, and have UCSB as my base.

*Dewey Livingston:* Did you do any other research project work other places, though, in the interim? Did you go, for instance, the desert?

*Lyndal Laughrin:* Well, my main interest was in the field biology world. And so, when taking field botany, field ecology and a lot of those classes, in those days, they supported people who worked in the field a lot more on most campuses, so there was more money for travel. So a lot of campuses and classes would allow you take trips to the desert, or the coast, or over to the Sierra Nevada.

So we did do a lot of field trips, but actual personal research or direct research was more just around the Santa Barbara area in terms of projects and working with someone else. I did do a brief summer job/project for California Department of Fish and Game on the distribution and status of the San Joaquin Kit Fox. This was in the southern San Joaquin valley in 1969-1970.

*Dewey Livingston:* I'm not a scientist, but would there be a need for gaining a sense of context for this place that you're studying, say, Santa Cruz Island and this part of the California coast; would there be a need to be study the areas around, maybe Northern Mexico, the Mojave Desert, the Central Coast, in order to better understand the island?

*Lyndal Laughrin:* Well, definitely, putting stuff in context is always good, either spatially or even chronologically. You know, what came before and where you are now interacts quite a bit. From the island's perspective, you can take two kind of angles. There's the interestingness of islands and how islands around the world differ the degree of isolation, the size, so you may be in a whole different world, but just because you're on an island, you want to do some kind of comparison thing.

The other thing is, this is an island system that's fairly close to the mainland. With the Hawaiian Islands, it's hard to find a close area to compare them to, but the Channel Islands, the Southern California mainland is nearby, and as a result of that, you have things that are related that are nearby and you have things that are nearby that maybe didn't make it out here for whatever isolation reason. And the evolution of things after moving onto the island because they are isolated and changing, whatever the changes that gets them to be recognized as a different entity.

So yes, to make a more extreme comparison of comparing the island to the desert, then you're kind of starting to go towards an apple and orange situation. I mean definitely there's stuff here because climate in the past was maybe more encompassing and it's changed. And you do have definitely plants here that were widespread over into Arizona and Mexico that are no longer found there or on the islands because of climatic differences over time. So yeah, I mean it's always good to have broader base of understanding.

*Dewey Livingston:* Yeah, if you're going to understand the geology of Santa Cruz Island, you'll need to understand the geology of, say, the Santa Monica Mountains and further down the fault system.

*Lyndal Laughrin:* Yeah, and you can carry it even further, you can look at the whole plate system. So the San Andreas Fault is a major separator of two big pieces of the earth's crust. And so the islands are a little piece that's almost right on that front edge as we're bumping into North America. So moving all those guys back in time, you can make a different perspective of where the particular rocks come from, say.

Because like here on the island, there's one little piece of rock over on the south side called the San Onofre Breccia, and the only other place it occurs is out down where the nuclear power plants are at San Onofre off San Diego. And to get those guys together, you have to move, somehow, those two big pieces of earth back – you know, one has to go one way or the other, and couple them together, again.

*Dewey Livingston:* I live at Point Reyes, so I have a sense of –

- Lyndal Laughrin:* Right, where the San Andreas zips off over into the ocean there.
- Dewey Livingston:* Well, stepping back just a little bit, it sounds like your interest in the outdoors had a lot to do with your choice of setting.
- Lyndal Laughrin:* I think. The area I lived in was conducive to that, the stuff our family did, and traveling around fit into that. Yeah, I don't know, when or how do you flip those switches [*laughter*], that make you want to be a mathematician, or – [*laughter*]. I was never good enough musically to become a rock and roll star, so. [*Laughter*].
- Dewey Livingston:* Were you/are you a backpacker, for instance?
- Lyndal Laughrin:* Never a heavy-duty backpacker. Camping, some, but no, I never tried to do the John Muir trail, or spend three days by myself in the wilderness living off the land.
- Dewey Livingston:* What kind of kid were you, if I may ask this, in high school, were you one who was always sort of looking at the ground or the animals, or –?
- Lyndal Laughrin:* Well, that, and I loved reading. I always did well in school, so I was always kind of in the brainy side of stuff. But I liked sports. I did a fair amount of sports. Nothing heavy-duty, and I wasn't like Mr. All-Star or anything, by any means. Yeah, and I did like school.
- Dewey Livingston:* Well, let's go to the field station, unless you think there's anything else that can add to that because –
- Lyndal Laughrin:* Yeah, who knows if it'll kick back in and pops out somewhere?
- Dewey Livingston:* I just found out from talking to you earlier that you really have experience here, back to day one, it seems to me. But could you, in a nutshell, give me a history of the Santa Cruz Island Reserve?
- Lyndal Laughrin:* Well, I think we can even go back and make the context broader. There's always been an interest in knowing stuff about the island, obviously, you know, what's here, down to more esoteric science, nowadays. The basic stuff in the early days was just kind of looking into seeing what's here. So people have been coming out here, probably depending on how you want to interpret it, you could go back to the Spanish expeditions; probably some of those guys were taking notes, obviously.
- But even like within the UC system, it formally, had people out here, early archeologists in the 1920s and guys doing stuff like that. And so people have been interested in doing stuff out here and even coming forward into a more recent time frame, like with Dr. Stanton's family. They were pretty supportive of the idea of people doing stuff, but they – you can't just have people come out here and turn them loose, so you had to come sort of at his invitation and be, more or less, guests of theirs, and that had certain problems built into that whole scenario.
- And so in 1964, a geology professor at UC Santa Barbara, Dr. Don Weaver, probably because of his interest in work related to the

geology of the channel, that being the era of exploring the channel for oil, and so, there had been a lot of work in the channel with drilling, and there had been a lot of work on the mainland side. But, there hadn't been a whole lot on the islands yet.

So he talked Dr. Stanton into allowing UC Santa Barbara to have their summer geology field school camp out here. So in 1964, they came out here and they camped in the field down here between the field station's current position and the main ranch just east of us, several hundred yards down about where the well sites are there. And they were out here like six or eight weeks, and the kids ran around the island doing geology things, mapping and figuring out the rocks and faults, and that kind of thing.

That was successful, so they did it the following the summer in 1965, and that was when they actually built the core building of the field station. It was actually an instrument shack down on the LAX Airport. It's one of those modular buildings, 4x8 panels. And so the kids went down there before coming to the island, and took it all apart, put it on a big trailer truck thing. In those days, we used to have the Navy to bring stuff back and forth to the island a lot because they had a big facility on the island and allowed transportation access to their boats.

So they shipped that out here, and the first week of class they put that together. It was sort of a kitchen/dining hall/study hall, and the kids camped, and they also had a full-time cook and they had their own jeep out here. So here's a situation where people are able to have a place away from the main ranch, you know, staying out of Dr. Stanton's hair and not screwing around with things and causing him a lot of trouble, and he doesn't have to worry about them. But at the same time, they're getting access to the place.

So that second summer, the geology professor, still Don Weaver, decided to allow some outsider, non-geologists to come out and visit during the summer. And so that's when I made my first visit with a young professor that had just finished his Ph.D. at Berkeley and had done kind of a fill-in for my professor, while she did a sabbatical. So he came down to Santa Barbara and taught the class that I was a TA (teaching assistant) for. And so I got to know him...

*Dewey Livingston:* And his name?

*Lyndal Laughrin:* His name was Dick Holmes – Richard Holmes, H-O-L-M-E-S. He was a sandpiper biologist, and later went to Dartmouth, and he's still there and maybe about to retire. And so we came out in June of 1965 just to kind of cruise around and see what kinds of opportunities were here because I was interested in what a potential project might be out in the islands for a graduate research project.

And some other people did the same thing over the rest of the summer. And at the end of the summer, these various folks got together and thought, you know, this is pretty cool. We've got a place where we're not in Dr. Stanton's face, right in his backyard. He doesn't have to worry about us too much, hopefully. Maybe we should go talk to him

and see if we can make this more of an ongoing, more formal arrangement.

They did, and they decided that they'd work something out. They formed an agreement, and one of the agreement restrictions was that the university would provide a full-time person out here to oversee operations and make sure people weren't leaving the gates open for the cows to get mixed up in the pastures and causing Stanton headaches and that kind of stuff.

And so they started a program just within the UCSB Geology Department and called it the Channel Islands Field Station. So it's first name was Channel Islands Field Station. They have a program within the university called ORUs, Organized Research Units. They are usually sort of a multidisciplinary group of faculty types that are doing kind of a common question or scenario, so you're bringing in biologists, geologists, geographers, other kinds of people.

And so it's not really a department, and it kind of has its own outside funding— usually, they don't have a really long lifespan, they're kind of soft money funded with grants. But, anyway, that's how they started this as one of these things.

*Dewey Livingston:* Did Dr. Stanton contribute at all to this?

*Lyndal Laughrin:* No, he was just willing to let the university have, through a legal agreement that they worked out with their lawyers, to have access and to have the facilities here. We didn't pay any rent, but he didn't fund it either. So it was basically still funded within the university. So then that allowed classes to come out and graduate students or faculty to start research projects.

And so they worked it out so they had a ten-year program, and every July 1<sup>st</sup>, it rotated for another ten years. So if somebody wanted to start a project, you more or less could guarantee, as long as they didn't screw up and cause a big problem, that they would have more or less a ten-year window to work within, which works well for going for outside funding, like NSF, or whatever.

So the first guy that they hired to run the program, his name was Michael Benedict. And I subsequently decided to do my master's (degree) with mockingbirds on campus and didn't come right out to start immediately here. But, as I told you, I had the opportunity as a TA for leading a bunch of field classes, so we came out several times. As I got near to finishing my master's, I decided I wanted to work with the foxes.

I started that program here; so I was coming as a graduate student in the late 60s, and got to know Michael, actually started working part-time to help support my graduate work as a part-time helper for him here, kind of the way Jeff [Howarth] did for me. I got to know Dr. Stanton and Henry Duffield (who ran the ranch), and basically got to know what went on day-to-day – kind of worked with him a lot, knew what was going on.

And then in the middle of 1970, Michael left fairly abruptly to go into the wine business. He was the partner with Richard Sanford for Sanford and Benedict Vineyards, one of the very first vineyards over in San Ynez Valley in the Santa Rita Hills. And so by then, I already knew Dr. Stanton, he knew me, and I had been out here a bunch, and I had helped Michael and I knew the ropes of the field station.

Well, they said, “Do you want to fill in? Michael is leaving, we need somebody to keep things going sort of temporarily until we figure out what we’re gonna do and hire somebody.” So I said, “Sure.” I need to be out there anyway, might as well get paid a little more to do that. And I don’t recall the exact time, but shortly thereafter when they decided that they would need to hire some one full-time, I said, “Well, this is pretty cool job. I’m not in any major committed career path to anywhere else.

But I’m still in the middle of my graduate fieldwork and hadn’t gotten that far along yet. So I said, “Yeah, I’d be willing do the job full-time, and as a career, if you guys want to consider that.” And so they gave me the job, actually. And I’m still here.

*Dewey Livingston:* So this is about 40 years later you’re talking about?

*Lyndal Laughrin:* Right. *[Laughter]*. And so as a consequence of that, I kind of slowed down my completing all of the field work and writing the dissertation for my Ph.D., but I did eventually get it done.

*Dewey Livingston:* Now, let me get that straight. That was still mockingbirds?

*Lyndal Laughrin:* No, I finished the mockingbirds – the master’s in ‘68. I think that’s when I formally got the thing signed, sealed, and delivered. I started the island fox work in about the middle of about ‘68, and so it took me a little longer than the normal path for Ph.D.s. All the field-work type of Ph.D.s; if you’re doing animals, it takes longer than guys in the lab, anyways. *[Laughter]*. If you don’t get something done that year, you have to wait another whole year for parts of the cycle. So that didn’t really get finished until 1977. So I had worked six or seven years full-time already at this job.

And then to complete the reserve history thing: in the meantime, and we could look up the exact date, but I think around ‘65, ‘66 also, is about the time that three professors within the UC system: Dr. Ken Norris at UCLA, who did a lot of vertebrate reptile work, but a lot of marine mammal work also; Dr. Bill Mayhew at UC Riverside; and Dr. Mildred Mathias at UCLA; these three are considered the founding father/mothers of the reserve program. There were probably other people who had input, too, but the idea was that people are realizing that where they’ve taken their grad students, and their field classes were starting to be comprised by either urban development, where places disappear all together, or landowner attitude about liability and trespass issues that were starting to compromise access and availability for these kinds of areas.

And they just felt that if the university wanted to guarantee this as part of their ongoing commitment for facilitating field research that there needed to be a way that UC is more or less in direct control of such areas. And so they came up with this idea that they should have representative sites for the diversity of California's habitats encompassed in this program, and started to convince the Regents (of UC) to start this program, called the Natural Land and Water Reserve System at that time.

And so finally in 1973, the Santa Cruz Island Reserve (then still the Channel Islands Field Station Program), and I think what used to be a Fish & Wildlife Service fish lab over in the Sierra Nevada east side, which was coupled with the program at Mammoth – a piece of property that the Valentine family owned, and I think Coal Oil Point/Devereaux Slough property. And in 1973, we all joined the Reserve System formally.

So we (SCIR) started independently: for two years it was a field camp, and in 1966, it became a formal unit, but only at [UC] Santa Barbara. And then in '73, it became a formal unit of the Reserve System. And now the Reserve System I think has 37 sites around the state.

*Dewey Livingston:* And I think I have read this is the largest?

*Lyndal Laughrin:* Well, it is the largest because we include all the acreage that TNC owns. So a few years ago, we lost 8,000 acres because of the transition of the piece that the Conservancy gave to the park. So yes, like Sedgwick [northern Santa Barbara County] it is a fairly good sized one – I think that's on the order of 6,000 acres. But some of them are fairly small, like Coal Oil Point Reserve and Carpenteria Marsh.

*Dewey Livingston:* And those you just spoke of are within the UCSB –

*Lyndal Laughrin:* Those are both at the UCSB suite of reserves. Others, like up in the Carmel Valley, the Hasting Reserve, which is one with a very long connection with UC because it started with the Museum of Vertebrate Zoology, probably back in the '30s, even, and it's administered by the Berkley campus. And so there's a group of them out in the desert that are administered by UC Riverside.

*Dewey Livingston:* What was Michael Benedict's discipline?

*Lyndal Laughrin:* Michael was an interesting guy. He went to UCSB, but as far as I know, he didn't formally graduate. And I think he wasn't a biology major. He might have been a math major. But he was sort of a self-taught botanist, and a very bright guy. He connected with the islands, I think, through sailing. He was quite a sailor and knew a lot of people on boats, and cruised around the islands.

But then he connected up with Dr. Ralph Philbrick, who was the Director of the Botanic Garden at Santa Barbara. And I think Ralph was the one that kind of got him really into plants. So Michael kind of became a self-taught botanist, very good botanist, and helped Ralph out in the field, and then kind of on his own, did a lot of stuff once he

was out here, as the manager (of the Field Station), and collecting and working with the Botanic Garden. And then he went into the wine business.

*Dewey Livingston:* Is he still alive?

*Lyndal Laughrin:* Yes. He was a planning commissioner in Santa Barbara for a while, and then he went into the consulting world. I haven't seen him in probably four or five years. I haven't kept up on whatever he's up to.

*Dewey Livingston:* Does he keep an interest in the field station?

*Lyndal Laughrin:* Yes, he's been out a few times over the past few years.

*Dewey Livingston:* So then let's go back to when you first came here. I'm interested in a description, if you could, of what it was like here? Later, we'll go into more detail on Stanton and the ranch, but if you could give a description of at least this area where you are in the Central Valley at that time, because it's different now. So what was going on here at that time?

*Lyndal Laughrin:* And the difference certainly relates to Stanton and how the Stantons used the island, because it was mostly a working cattle ranch at that time. So one difference right here, we didn't have this complex of facilities. It was a smaller group of buildings because it's been enlarged over time. The ranch had Mexican cowboys, cattle and horses around, people doing the daily work of moving around and dealing with ranching kinds of activities.

But also, Stanton liked to know what was going on, so that did color how you approached what you were doing here. That was the job of the manager of the field station. He had to make sure the ranch knew where you were going, and just as important where they were doing things so you wouldn't get in the middle of a cattle roundup and movement and cause the cows to go crazy and screw up a day's work.

And besides having the cattle around, and depending on what part of the island, you still had the feral sheep. The look of the place was very different because of the grazing regimes. It varied from severe overgrazing on remote mountain areas, where the sheep were, with the extreme bareness and erosion, to more moderate grazing, where the cattle were. Then there some of these woodland chaparral wood-sides, where the cows and sheep didn't go at all. [Those] probably don't look much different than the way they looked before the grazing, then the way they look today.

*Dewey Livingston:* Well, for instance, I'm looking out here at what appeared to me to be somewhat young live oaks. Were they there, or was this all much more open?

*Lyndal Laughrin:* Those probably were not there. There are not very many good images or descriptions of the valley, but there are some big old oak trees – the big ones right behind us – and a few that I see in this same area, I think some of these big ones along the bank back here are certainly that old.

And with the grazing regimes of primarily either sheep or pigs, things like oaks suffered drastically. If you're the big old guys, you'll survive, but any acorns that fall on the ground, either the pigs eat them, or if they do germinate, then usually the sheep would eat them before they get very big. So these smaller age classes, modest size trees of – really practically almost anything you could think of, all popped up since the end of the grazing era.

And that would kind of vary because that was a mosaic pattern of time when that happened over the island, but it would all look differently. It would be much more wide open, barren during the fall because everything's been eaten away by that time of year. And you're finding a lot of fill in not only of the oak trees, but also shrubbery, the coastal sage and the chaparral moving down more and onto the valley floor because the valley floor had the most intense grazing and farming because on the other side of the ranch was where the vineyards were. So they not only grazed there, but they plowed and cultivated that area and planted crops.

*Dewey Livingston:* This was basically part of the cow pasture here where we're sitting then, not necessarily a place they worked cattle, so it wasn't completely beaten down like in the corral, is that right?

*Lyndal Laughrin:* Probably. I mean, yes, the corral areas, where they bring the animals in during the roundup. But even cows on their own are kind of lazy, and so you tend to have the lowlands, you know, it's a big problem for the riparian, where the water is; the cows come there for those reasons. They're basically lazy; they'd prefer to be down in the flatter, less steeply angled areas. So those are the ones where besides eating, they're just mucking around and beat them up more. And then if you did increase that impact by corralling them and penning them where you have a lot of them in a confined space, then that just becomes a turned-up dust pile.

*Dewey Livingston:* So was the field station fenced, or did you have cows roaming through?

*Lyndal Laughrin:* Well, the complex of buildings we have now has exceeded what the original fenced spot was. Yes, there were cattle here. The cow/calf operation that the Stantons ran meant that they moved the cows around a lot during the different times of the year. So part of the fencing allowed that – like the bulls were allowed here in the Central Valley at certain times of the year, when they weren't with the cows for breeding.

And then some areas were just for the horses, so they had a – probably right near the ranch – there would be smaller pasture-sized fenced-type of pattern. And just to keep the animals from being in the yard all the time, we did have sort of a fence boundary that defined the field station.

*Dewey Livingston:* Okay, that's what I was getting at. And were you able to observe changes – because that's basically an enclosure at the time?

*Lyndal Laughrin:* No, because that wasn't big enough – right around the buildings where people are milling around all the time and driving the cars. So, no, it was not big enough to have any natural kind of change happening. Plus, in the vicinity of the buildings we mowed the vegetation for fire safety reasons.

*Dewey Livingston:* Later, I'll get into more of the details of the other activities on the island. I just wanted to sort of get a snapshot of the mid sixties here, and it was a cattle ranch.

*Lyndal Laughrin:* It was a cattle ranch, a working cattle ranch.

*Dewey Livingston:* And so, for instance, the drive up from Prisoners', how has that changed since 1966?

*Lyndal Laughrin:* It has changed, but the cattle really didn't – I mean they'd go in there, and they'd drive them down the creek, down the wash to the harbor to the corrals for shipping. It wasn't really part of a pasture, so it wasn't like a grazed area, and there's not that much grass. I mean there's stuff, ephemerally, on some of those little terraces in the riverbed, when they don't get washed away.

The changes there, I guess you could say are quasi-natural. You would have to think about how much we've changed the hydrology of these upper parts of the watershed by the change in grazing there that would influence how much water goes down that canyon. I mean, even still, in a big El Niño year, it doesn't matter what the grazing is like because if you get that much water, things are going to change.

So you would have seen years when it's more open, and so now there's been a gradual change because you're getting more vegetation up inland now because you don't have the grazing and so you're holding water better. So even if you have a bigger event, you might not get as much flowing as you used to get down there. So the big widespread things where the whole canyon gets water, you know, the width of the river bottom flushing and moving stuff around – if somebody had been looking at that over time, you might be able to see change.

But you still might see some pretty big spikes of disturbance because of how big the rainfall year or how major the storms are in terms of a timing kind of thing. I mean, you could have a big wet year but that doesn't necessarily mean you have a lot of catastrophic downpours because it's spread out so evenly. You can have a smaller total, but if it all came at once, it can just beat the hell out of the place.

*Dewey Livingston:* Let's talk about administering this place. You took that on in the early seventies, you said '70 or '71, what were your original responsibilities here?

*Lyndal Laughrin:* Well, on paper, the responsibilities are still the same. They haven't really changed a whole lot. It's just the amounts of people that you're running through the place and having to do all the upkeep things, have

certainly increased over time. I mean there's probably been some change because just within the university, everything's grown. And even though you're isolated and remote, things catch up with you over time, especially with Internet access convenience and that kind of stuff.

So in the beginning, you're out here sort of way out on that island and people forget about you and not that many people come and go, so they don't get prompted to pay attention. Now, with lots of people coming and going more often, you know, just more issues and attitude about risk management, liabilities, people are checking up on things more often.

*Dewey Livingston:* Well, for example, what kind of volume of people are you talking about coming in, say, in the early seventies?

*Lyndal Laughrin:* Well, if we wanted to have accurate numbers, we could just get out the old annual reports and get the numbers.

*Dewey Livingston:* Well, just in general.

*Lyndal Laughrin:* Maybe a hundred different individuals with three or four hundred person nights a year to, now, maybe a thousand individuals a year, with five or six thousand person nights a year.

*Dewey Livingston:* And that's individuals... how about groups?

*Lyndal Laughrin:* Well, that's individual persons. And it varies from one guy to a small research group of two or three, to classes of 30-35, sometimes. And you get the same thing, you get a variation from a few people that started working out here about the same time that I did, they became professors and had done their whole graduate work coming and going out here, like Dr. Mike Glassow in archeology, and several other graduate students.

And some of those graduate students have now become professors and are bringing in their own graduate students. So you have sort of this generational succession of people doing projects out here that started when they were grad students and moved through this whole cycle. And you get people who have a long-term project, where they're doing repetitive collecting or sampling or observation stuff, to people who come out here and take one sample and go back to their lab and you never see them again.

*Dewey Livingston:* Did you have a say in who came out – maybe not specifically *who* came out here, but what kind of research? Would you, for instance, be able to say, "That really isn't appropriate for this."

*Lyndal Laughrin:* Well, we do have that power, or if you want to call it that, responsibility. And we have kind of a hierarchical system of oversight, so there's the pretty simple stuff that was pretty obvious that I can just say yes or no on. And that can be like it's so weird that you couldn't even do it here, and I don't have to really consult anybody

else. To – that’s so benign that I don’t have to consult with anybody else and can say, “Yes.”

To stuff where it’s more gray and I basically need some other input to assess whether it should be done, then there’s the bottom line that has always been the island owner, so, in the past, it was Carey Stanton. If there was something that he didn’t want done, he could always say, “No,” even though we wanted to say, “Yes.” Or if you didn’t want something done, or didn’t want to be the fall guy, you could always put it back on him, and he would be the one that would say, “No.” [Laughter]. And the same thing now applies with The Nature Conservancy.

And then we have sort of a hierarchy of categories. If anything is going to be any kind of disturbance or major impact kind of situation, then we consult with TNC and they have some input, and they do reserve the right for the final say. So, for instance, if somebody wants to come out here or watch birds or collect a few samples of a common plant, we can just get the approval without talking to TNC more or less.

If somebody wanted to do a prescribed burn, where they wanted to manipulate fire and compare the results of that with a non-burned area or something on the mainland, then we’d have to go through a whole much more formal elaborate approval process. And there’s the same thing with allowing the University to deal with animals, any vertebrate species, there’s a whole different program you have to go through for approval within the University before you can even come out. I could say that you could do this project on the island if you get this other approval, yes, but even if I say, “Yes,” you can’t do it without getting this whole protocol through and approved of how you’re going to deal with a vertebrate animal. This is because of animal right issues that are going on in research places.

So it can be a real easy call. Or, I’m not just going to approve it straightforward, but...

*Dewey Livingston:* Isn’t everything generated through the student’s professor, though, or can a student independently come to you?

*Lyndal Laughrin:* Well, there usually has to be some oversight – undergraduates and graduates doing projects usually have a professor that’s overseeing them. But we’re not exclusive to university access either. We have agencies; a lot of people from the park service do stuff through our facilities here, people through museums of natural history, botanic gardens, that kind of thing.

It’s sort of follows from the UC bigger mission. It’s research, education, and kind of public outreach, and it has to have some kind of value within that system. And then on top of that, it has to pertain to why does it need to be done on an island or what’s the value of the island situation that means you can’t do it on the mainland? So those are part of the thought process.

- Dewey Livingston:* You mentioned that there might be some things that Dr. Stanton wouldn't want done; do you have any examples?
- Lyndal Laughrin:* Well, obviously being a cattle rancher, he was more paranoid about things that might impact on what he could or couldn't do with the cattle.
- Dewey Livingston:* Like a range management study, or –?
- Lyndal Laughrin:* Yes. Most of the interaction with the Stanton ranching era was before endangered species were such a big issue. But something along that line, like you finding some rare thing that you'd have to say, you shouldn't put your cows in that pasture because that would be – you know, he'd still have the right to put them there if he felt like it. Nowadays, that wouldn't be the case.
- Dewey Livingston:* Sounds like you did need to pass everything by him, is that correct?
- Lyndal Laughrin:* Well, not everything. That was my responsibility – to build that trust. He trusted that I would know when to come to him about things that needed to be brought to him, and when not to bother him with [details]. But at the same time, after the fact, he was always very interested in what was going on here, what people were finding out.
- For instance, he always wanted copies of their publication, their dissertations. He'd actually read them. He would come and talk to the kids about what they'd done. So from that perspective, he was interested and supportive, but he did have the ultimate power to [veto] – and wouldn't hesitate to use it.
- Dewey Livingston:* Did he come out here fairly regularly to visit at the field station and ask people about what they were doing?
- Lyndal Laughrin:* I wouldn't say fairly regularly, but he would come up, for certain occasions. We would invite him for dinner, parties or things like that. His ranch foreman, Henry Duffield, was much more the social kind, loved to go around the island and hang out with either the Navy guys or the hunt club guys, because he'd be around more and see people all the time. So he'd know some of the regular folks, professors and graduate students.
- Stanton was more – interact with him on his time, and not just kind of casual drop-in: more formal.
- Dewey Livingston:* How did you tend to spend your time? Are you kind of a jack-of-all-trades out here, what would be a typical day like, what are your responsibilities?
- Lyndal Laughrin:* Well, you did have to basically do everything and anything. You didn't have easy access to other people to come and do jobs for you. I grew up on a farm, I wasn't particularly a car enthusiast type of background. My brother was into the hotrods and motorcycles, and I was into books and, [laughter], that kind of stuff. But I wasn't inept,

and it's just kind of one of those things where you kind of start doing it, and if you're intelligent enough, you can figure it out.

And, sometimes, you might have to get somebody to help you put it back together, *[laughter]*, if you forgot something, or whatever. So yeah, you had to do kind of the basic plumbing and fixing tires and changing oil and...

*Dewey Livingston:* Not rebuilding the engine, necessarily?

*Lyndal Laughrin:* Well, no, not usually. Although in those days, it was more conceivable than nowadays because you didn't have all the electronic computer, smog-controlled type of stuff going on. In the early days, it was pretty straightforward, simple stuff. But, luckily, very early on, we connected with a guy that's a pretty good mechanic that was a bow hunter out here and helped us a lot. His name is Earl Rider and I could kind of looked over his shoulder and learn a lot of things related to that. He's been coming to the island since the mid-60's and he still helps us and currently works on the island at the Navy site.

That's always been one of the interesting things about this job – no day is the same. No two days are the same. There's constant diversity of people and projects and the opportunities to get out to different parts of the island all the time and see different things, constant stimulation.

*Dewey Livingston:* Well, you have a Ph.D., so I'm taking it that you managed the place, but were able to continue pursuing your interests?

*Lyndal Laughrin:* I did kind of keep my hand in some research stuff. The job, the responsibility, was to run the place and have it available and facilitate research for other people and not to have a personal agenda and research program of my own. So as things get busier and busier over time, it worked out easier to couple up with other people and collaborate to do some research.

I also got out off of foxes after I finished my PhD, and actually got into doing stuff with fire on the islands, and feral animal disturbance, those kinds of things. I actually worked quite a bit over on Santa Catalina Island doing stuff with Catalina [Island] Conservancy with fire. And they were right in the beginnings of their feral animal removal programs over there with pigs and goats.

And then I got back into birds, and so the current stuff that I'm most active in relates to birds. I've been doing the monitoring comparison for the before, during, and after wetland restoration down at Prisoners' Harbor that's about to happen.

*Dewey Livingston:* It didn't look like it had happened yet.

*Lyndal Laughrin:* No. They're talking about the excavation in October now, but we have a several year series of figuring out what's there before they do that so we have a comparison of before and after.

*Dewey Livingston:* On a practical level then, what was your relationship with UCSB? We know you worked for them, etcetera, but what kind of oversight did you have, what kind of communication with them? How did a budget work?

*Lyndal Laughrin:* Well, the structure was that we had a group of reserves operated by UCSB, so we had a common office with an office person. And that deals with the university policy stuff, most of the budget, paperwork, accounting, because we did have a recharge system for people staying here, so all of the money handling, all the billing is done by the campus office. I don't have to do any of that out here.

*Dewey Livingston:* And that's always been the case?

*Lyndal Laughrin:* Right. And of course in the early days, we didn't have the convenience of the Internet and cell phones, so the communication kind of had an evolution – the whole island had its own evolution compared to the mainland. I think when I first came out here; we had ship-to-shore, an old marine radio. So we'd call the marine operator, and they would patch you into the phone system. Most everybody that's on it could listen in and hear what's going on.

Then for a while, we had our own dedicated radio linkage that, same thing, with a handheld radio that you talk and then you wait for the other person on the mainland to respond. So somebody on the other side has to have the same phone. It's not linked into the regular phone service.

*Dewey Livingston:* How was that being transmitted?

*Lyndal Laughrin:* We'd have radio units on top of these peaks, different places we had tried over the years. Usually because we're down here in the valley, you have to have an intermediate point, you know, to get out of the valley up to a mountaintop. And so the ranch had the same problems, so there's always kind of sharing with whatever systems were trying to be made more efficient over the time.

For awhile, we had a phone that actually had a cable that went all the way from here in the valley at the station then into the ranch, all the way up to the Navy side, and then hooked into their microwaves to send stuff to the mainland.

*Dewey Livingston:* Did these communications originate with you in the field station, or with Stanton and –

*Lyndal Laughrin:* Most of it was Stanton and we had a lot of help from Theodore (Ted) Green who worked for the Navy at Pt. Mugu but helped us and Dr. Stanton with all kinds of communication logistics.

*Dewey Livingston:* Okay, and you'd patch into it that?

*Lyndal Laughrin:* Yes, we'd patch into those systems. One of our later radio systems was our own separate one that we put in. And coming forward in time, you get to the cell site system. Verizon started out here on top of

Diablo Peak – Picacho Diablo – many years ago. So now we have our own cell phone service that is dedicated just to the islands. The ranch people have Verizon service, also.

And then, finally, we put in our own Internet. So I have a dedicated Internet system for the university that goes from here to a peak called Valley Peak out to the east, right above the airport. And from there, another set of radios link it right into UCSB.

*Dewey Livingston:* It's not a satellite system then?

*Lyndal Laughrin:* No, it's just a two-link radio microwave. The ranch uses a satellite system for their Internet right now.

*Dewey Livingston:* And your Internet system works pretty well?

*Lyndal Laughrin:* Well, it has worked, until recently, quite well. But we're having problems with either some equipment failure or some kind of interference – because we're in an unlicensed frequency band. And when we started 10 or 12 years go, probably not so much stuff going on. Now, it seems to be off the air quite a bit.

But we just got a big NSF grant for upgrading around the whole Reserve System for the Internet connections. So my upgrade is going to be a dedicated frequency radio system. And so I don't want to put any more money into the current system that's failing unless it's like really cheap and works until I get the new radios. So, right now, we're kind of living with a marginal, not very on, often off system.

*Dewey Livingston:* Has there been a particular time that you need to check in, or are you pretty much on your own?

*Lyndal Laughrin:* No, we're just pretty much on our own. I mean we try to check in with the office a couple times a week. In the old days, probably more often. But in the old days, things were more hit and miss. I wouldn't have to be out here continuously, so you'd be back on the mainland because people weren't out here. And this whole evolution of improved communications has made the requirement of actually physically going to the mainland less and less.

Now, you can actually transmit documents through the Internet, whereas before, if you needed something that was signed or hard copies of stuff, you had to hand carry it or get somebody to. Because we don't have direct mail service out here either, somebody has to take it to town and put it in the mail for you. Nowadays with electronic banking and Internet, using credit cards, you could live on a remote island and still have a lot of normal life conveniences happening all around you.

*Dewey Livingston:* Or what's normal now.

*Lyndal Laughrin:* Well, true. The definition of normal is, *[laughter]*, probably not...

*Dewey Livingston:* Okay, so we're going to break for the day, and restart the interview at another time.

End of audio file 1; total time 1:04:35

Audio File 2, Saturday morning, May 7:

*Dewey Livingston:* Today is May 7<sup>th</sup>, 2011, and we're continuing the oral history interview with Dr. Lyndal Laughrin at the field station on Santa Cruz Island. Yesterday, we talked about your background and your family, and I neglected to get your parents' names and if you had any siblings.

*Lyndal Laughrin:* My father was Lyndal O. Laughrin. And my mother was Muriel O. Laughrin. Like I mentioned, her maiden name was Manning. And I have one brother and one sister, Kenneth and Merlynn.

*Dewey Livingston:* How do you spell Merlynn?

*Lyndal Laughrin:* M-E-R-L-Y-N-N. And both my parents are now deceased. Mom was 99 ½ when she died, and my dad was 97 or 98.

*Dewey Livingston:* Good genes.

*Lyndal Laughrin:* Yes.

*Dewey Livingston:* Okay, before we get into some of the highlights of research, etcetera, that's gone on here under your eye, so to speak, I wanted to go into a little bit more about the development of the field station here. For instance, you talked about the building where the kitchen and all is. Starting from there, could you give a little background of how it expanded, when particular buildings came here, or how they came to be built.

*Lyndal Laughrin:* Sure. So as visitation started to increase, obviously we needed to start adding to the facility infrastructure. The first building essentially remained as the kitchen/dining hall, and kind of a common work area. The next structure was the building adjacent to that, which became the bathrooms, a workshop area, and part, a small carport garage. And at the same time, they built a porch around the first building –the dining room/kitchen structure.

And so you ended up with a big porch on three sides, kind of a U-shape around the kitchen that became kind of a half-wall, screened sleeping porch. And then over the years, that was partitioned into individual rooms, so now it's sort of like a dorm situation, where you have a series of rooms with sets of bunk beds in them. The porch was done in, I think, 1968-69; the rooms in 1989.

About '69, Michael Benedict had arranged for a small modular building, that was used on campus, to be transported over here. On campus, it was like a temporary office quarters. It was a long building with five rooms in a row and used for offices. And so they brought that out here on a Navy barge and brought it up the canyon, and it became the core of the Director's housing, the residence for the Director. And over the years, that's been kind of camouflaged, built over and around, so it's now, for all intents and purposes, sort of a normal house with several rooms.

And then in 1981, we had an NSF grant from the program that supports infrastructure development for field stations and marine labs. We submitted a proposal, and we were awarded a grant to add the buildings we're in right now: a library/conference room; a small double room, laboratory space; and then a series of private rooms for long-term visitors, private bedrooms. So now we can handle probably about, oh, between 25 and 30 people in bed space, comfortably, and then we can have people put up tents if we want to have some extra space.

And the final building that was added was another modular unit that came from one operation that shut down out here and basically needed to disband and put their site back to the natural situation. So, both to help us increase our facilities and to save them the expense and cost of taking stuff off the island, they donated a couple of modular units, and that became the one that's the little computer workspace/office space behind the resident bedrooms, and another trailer modular unit that has become the resident space for my part-time help, my reserve steward, Brian Guerrero. It's just across the road and up on this little hillside.

*Dewey Livingston:* Did you say these residences and library were modular?

*Lyndal Laughrin:* Yes, we talked about how the first building came apart in panels and a re-put together configuration out here. The second iteration of building was basically done through the facilities folks, physical plant people, carpenters, plumbers, and electricians at UCSB. And so we just brought raw materials, lumber, whatever out here, and then built the structures onsite. And so for various reasons and cost efficiency, we decided the next time, when we did the grant project, to try just bringing stuff completely done from the mainland and put it in place here.

And both ways have had their pluses and minuses.

*Dewey Livingston:* Are there plans for any more expansion?

*Lyndal Laughrin:* We don't have immediate plans. We're sort of at a point where it works well at this size, and if we're going to do more, it's almost another magnitude scale step-up. We need to certainly have a consultation with TNC about whether they are willing to support that, how appropriate it would be, would it mean more staff, which means more housing. There are just several issues that haven't been resolved in order to answer that question, yes or no, but it's certainly possible.

There are some other potentials for using some of the other space, rehabbing that that's on the island to facilitate research and education, but again, just kind of working through the vision of the place. And in this day and age, currently, certainly the dire economical straits that the University is in, you're trying to save what you have more than you are trying to expand programs.

So that's another consideration in the immediate foreseeable future, certainly – it would certainly have to be put into the equation. So if you're going to do something like that, it probably means going for

outside funding, so there's a whole kind of bunch of ducks that have to be lined up before we can get to that point, certainly.

*Dewey Livingston:* Could you talk about developing the electrical and water systems that serve the field station?

*Lyndal Laughrin:* So, originally, when the geology folks first came out here and they wanted to have a separate place they talked to Stanton, and the idea seemed to be to have the facility, or what they were doing at least not right in the backyard of the ranch, but at the same time, close enough that you could tap into some of the existing utility infrastructure. So we're probably, say, a half a mile to the west of the main ranch.

And from the very beginning, they tapped into the water supplies that the ranch was using. We ran electrical lines (from the ranch) up to here. We have separate propane, just portable trailers, so we don't have to worry about that other than the logistics of bringing stuff from the mainland. And then over the years, we've just improved, developed that same connection. So most of the stuff is shared with the ranch, first with Dr. Stanton's operations, and then later with TNC.

So, for instance, the University went in and contributed money to buy new generators and shared the cost of maintenance and that kind of stuff. We shared the cost of the fuel. We mutually developed the wells, so most of the things are pretty cooperative. The solar system, we share in maintaining that. In order to take some of the load off of the system, I have stand-alone separate solar facilities that run the electrical supply for my residence and for the steward's residence.

*Dewey Livingston:* What is the source of the water?

*Lyndal Laughrin:* We use just the island's water and that originally used to be springs with developed spring boxes. More and more people started worrying about liability issues, health issues, and just not having to deal with a lot of that kind of stuff with springs. We changed over to having wells. And so we used some of the old ranch wells, and then just recently, we've actually installed new wells.

*Dewey Livingston:* Does the Navy well come into this?

*Lyndal Laughrin:* No, the Navy well is way down at the bottom of the harbor canyon, so that's like three miles away, so that wouldn't be a...

*Dewey Livingston:* Was that water, since we're on that, pumped up to the Navy base?

*Lyndal Laughrin:* Right. They have a pretty long run through the pipeline for their support.

*Dewey Livingston:* And that remains in use, doesn't it?

*Lyndal Laughrin:* Yes, that's still the water supply for the Navy site up on the mountaintop.

*Dewey Livingston:* Let's talk about the program here. You mentioned earlier, other organizations and agencies that cooperate – could you expand on that, how some of those relationships came to be, and how those are managed?

*Lyndal Laughrin:* Well, the Natural Reserve System mission is to facilitate and support research, education, public outreach, and stewardship of the earth, natural resources and cultural resources. And so even though it's an UC-run, -funded, and -managed program, that whole vision encompasses more than just what UC does or facilitates. So all the reserves are basically accessible and available for all kinds of people and intuitions and agencies besides just UC. You don't have to be affiliated with UC to use them.

Also because of where any of these places are located, you're obviously going to have neighbors, and even in some cases where UC owns the property outright, there are cooperative agreements. So you're on other organizations', agencies', or people's properties. So, obviously, the operation has to work with those people, but your surrounding neighbors – I mean you're basically working with ecosystems and habitats, so usually your little plot isn't the only thing involved in the bigger picture.

So getting along with them, facilitating, interacting with them, so that everybody is on the same page, compatible, complementary, is certainly part of the goal. And so in the case of Santa Cruz Island, UC does not own the property here. We're here through an agreement with The Nature Conservancy now. It started with Dr. Stanton and the Santa Cruz Island Company. So we don't really have any sort of obligatory responsibility for direct management of the property; that resides with The Nature Conservancy.

So depending on the issues, you can have a lot of other agencies involved from legal perspectives. But, usually, the UC role has always been more of – we've provided information through the research and programs that have gone on in the past. And so we're kind of aiding the management's interpretation and decisions on what might be going on because we're providing knowledge on issues or resources that they're dealing with, whatever is on their plate at the time.

Sometimes it's just because of my long residential history and the breadth of my knowledge about the place over time, and resources and whatnot, I participate more as a consultant or an advisor in group meetings, that kind of thing. But I don't have a vote on any decisions on most matters.

*Dewey Livingston:* I see your name as a reviewer or, I wouldn't use the word "consultant", but in a number of books and projects and things. Is that one of your main roles in, say, a project that the Santa Barbara Botanic Garden would be doing here?

*Lyndal Laughrin:* Well, we have a fairly formal application process in order for someone to use the field station and work here. And so I'm basically the first line of oversight or review of whatever people want to do. And

depending on what they may have in mind, I can give permission, or we can have a more involved review with other levels. And in some instances, it may need to go outside of the University and involve The Nature Conservancy.

Mostly those are projects where people are trying to manipulate things, work on endangered species, something that would have an impact that would need more input in terms of what it's affecting and whether it's appropriate or not.

*Dewey Livingston:* Do you have occasion to get a little involved in somebody's particular research project because you're particularly interested in it?

*Lyndal Laughrin:* Yes, I've had collaborative work with different people, again, based on my personal interest, and sometimes it's just because of logistics and what they might need to do. It's sometimes very easy for me just to quickly do something that would involve them having to spend a day coming from the mainland, a day and overnight, and then going back the next day.

Whereas I can just stop by on my way to do something, and get it done in 15 minutes and save them all that hassle. So there's a variety of ways that I interact with people and facilitate their programs. And depending on my interest, I may get involved to the degree that I'm virtually a co-PI or an assistant on the project.

*Dewey Livingston:* You've been here long enough where you are the person who probably knows the most about this island, at the moment...

*Lyndal Laughrin:* Yeah, I've outlasted all the other ones. *[Laughter]*.

*Dewey Livingston:* So what are some of the highlights of work you've done on the island? Maybe we should start with your work with foxes early on. Could you give an overview of what that project entailed, how you approached it, etcetera?

*Lyndal Laughrin:* Well, when I started, the island fox had basically only been described. There was very little know about its natural history, you know, food habits, what they were doing. So part of my work was just basic natural history. It was descriptive, figuring out what they were eating, looking at how they utilized resources over different times of the year, different plants, fruits, or insects – whatever.

At about the time that I started with the foxes, – a little prehistory: originally, the island fox was just considered lumped in with the gray fox in terms of the state's treatment through Fish & Game. And so this would have been in the 1960s, early 1970s, people were beginning to realize that foxes on Santa Catalina Island, which is by far the most visited island by the public, that that population had dropped and they seemed to be getting very rare.

Island foxes were showing up in the pet trade on the mainland. And so at that time, the island fox was considered actually like the gray fox, a furbearer. And so you could have a trapping license, and you could

catch them and skin them and sell them. This was about the same time that within California Fish & Game, people were starting to apply pressure to start considering other animals besides the traditional game animals.

So they started what they called the Non-game Wildlife Program within Fish & Game. So starting to look at things besides deer and fish, and the normal things that people were hunting all the time. And so they somehow got information about this work going on with the island fox, and they heard about this guy at UC Santa Barbara working on foxes. And so they asked me if I would go to each of the islands that had island foxes; they're on all the six big islands. The little guys, Anacapa and Santa Barbara [islands], don't have foxes.

So they asked me if, as part of my work, I would go to all the other islands besides Santa Cruz, where I'd done most of the work, and sort of get a rough idea of what was going on. Do some trapping, try to get a sense of their population status, how healthy they were, that kind of thing. So I incorporated part of that into my dissertation.

As a consequence, I made a couple of visits to each of the other islands, and ended up putting that into the research project, besides just kind of other basic natural histories. So we ended up with tagged animals, and you can look at age structure in the population, those kinds of things.

*Dewey Livingston:* Were you making comparisons from island to island?

*Lyndal Laughrin:* Yes, you could look at the differences between the islands. You could relate what gray foxes were doing – the island fox to the gray fox, what's known about the gray fox on the mainland. And then as a consequence of that, and the information I passed onto Fish & Game, they actually gave the island fox – took it away from being related to the gray fox as in a legal sense. And, actually, I think they put it on the state's threatened list, so it gave it some protection.

So you no longer could have people catching them and trying to make pets out of them, and you certainly couldn't trap them, skin them, and use the fur, that kind of thing.

*Dewey Livingston:* What were some of the differences you were observing from island to island?

*Lyndal Laughrin:* Well, at that time, Catalina definitely did have a very low population. The other islands seemed to be more or less in the ballpark of what might be considered their carrying capacity. The numbers were pretty good. There were some issues at San Nicolas Island, where they have a fairly large component of people out there supporting the military operations, and so they have a big mess hall, and they were just feeding all the leftover food to the foxes, and they were supporting probably an artificially high number of very old animals.

The food habits varied between the islands, mostly because different things are on different islands, and so what they had available to eat

would be different. I really wasn't doing a newer version of why they're different on each island taxonomically. Some people that came after me carried on with some of that. Contemporary research has been looking at the question of how they got to the islands, how related they were between the northern islands and the southern islands. The idea that Native Americans influenced getting them to the islands, and that kind of thing.

And then, of course, much more recently, we had big changes in the populations due to changes in predation and disease. The Catalina population, again, had a crash in the late nineties, this time because of distemper. The northern islands had a population crash because of golden eagle predation, but I had gotten out of fox research, and so I haven't really been an active participant. I've been participating in meetings and discussions, and working from that perspective, just with my long history with foxes and all kinds of other things related to the islands.

But in terms of hands-on fox research, I haven't done that for quite a while. So I got sidetracked off into plants and birds.

*Dewey Livingston:* What were the impacts on foxes from the ranching operation, for instance?

*Lyndal Laughrin:* Well, we know in the past, when they had the vineyards going, the classic story, a fox gets into your vineyard and eats your grapes, so they weren't too supportive of that. So there were actually guys being paid to kill foxes back when the vineyards were going. In the Stanton era, probably in one sense, the fox's habitat was improved and life was better for them when they began transitioning the habitat from sheep grazing to cattle grazing. So because these guys were depending on a lot of plant, fruits, and insects, so if you modify the grazing regime, cattle are not as destructive as sheep, so probably you're ending up with better food resources in some areas.

But it's hard to tease some of these things out because as we well knew, we got rid of the sheep; that habitat all improves. Right away you expect, well, okay, you've got better conditions, we should have more foxes. All of sudden, this eagle situation occurs just about the same time, and instead of more foxes, all of a sudden, you have less foxes. So it's a complex interaction of things going on. So it's not straightforward that you...

*Dewey Livingston:* Were the eagles also attracted by the pigs, as I understand?

*Lyndal Laughrin:* Well, right, the thinking is that is basically golden eagles are diurnal small mammal hunters. So if you go back in time in the natural situation on the islands, there weren't really any small mammals in that kind of size range and prey availability scenario.

So when golden eagles did come out here, there wouldn't be much for them to find to eat. So you probably never really had a breeding population, you might have an immature coming out, or once in a while, guys coming out and maybe taking a fox, or whatever. But not

staying around long enough and establishing territories and building up a population.

And possibly in that time frame, you also had bald eagles in residence, and that could have been a discouraging factor. So when livestock were introduced, you end up with baby lambs – well, sheep, and baby pigs, which certainly at their smallest stage are a perfect size for golden eagles. So when the eagles that are coming back and forth, they'll occasionally start seeing these guys and been able to utilize them. They you do have the potential to stay around all year and nest and feed babies.

And so we think that's what happened without anybody really realizing it. And then we come in and remove all these guys (the livestock, and the feral animals), remove that prey availability. And the eagles that are here in residence have probably taken a fox or two now and then, and so they figure that out and have to sort of switch over to relying more on foxes.

And, certainly, the foxes that are out in the open habitat are the most vulnerable. And that's the pattern that we noticed when we did realize that the eagles could possibly be the culprit, that they were disappearing in the wide open grasslands areas, which is basically all of San Miguel, most of a Santa Rosa, and the Christy-west end part of this island. So that's kind of the pattern that happened when the fox declined.

And then, subsequently, we went through the whole figuring out what's going on, and narrowed it down to the eagles, and started a process to capture those guys and move them out of here, captively breed foxes to build the population back up, and get it back to a situation where we no longer have a large abundant prey base that would support resident golden eagles. Golden Eagles are impossible to keep from flying out to the islands, so the ones that do come back and forth won't have a reliable food source, and get the fox population up to a certain level, where it's more or less healthy and can maintain itself.

And at the same time, it can sustain mortality from a few eagles spread out over time. What you don't want to do is have some eagle come out here and figure out how to hunt foxes and start staying. So that's where we're at now with a monitoring program that tries to pay attention to mortalities of foxes, spatially and temporally. If you think that something is happening, start looking more intensively to see whether or not it's an eagle, verify that the mortalities are eagle kills and not just old age...

*Dewey Livingston:* So you still have eagle hunters coming out, eagle catchers?

*Lyndal Laughrin:* Well, we only do if we finally identify that we have an eagle that's persisting in a place and you have several mortalities. There's a whole system devised with a threshold triggering of what starts the next part of the program in terms of how many foxes in a space in a short period of time, and then go to the next stage immediately kind of thing.

*Dewey Livingston:* But overall, the habitat is improving for the foxes, it appears, with the vegetation?

*Lyndal Laughrin:* Definitely. And so from that perspective, you should have more abundant food, you should have more plant fruits, more insects. So as long as you don't bring in some other factor like disease. And that's part of the problem with these island situations, before humans – well, I guess you have to sort of think about what the Native Americans were doing, but at least, in some perspective, these things were set up with these systems during a time with a greater degree of isolation than we have now.

So what we've done is break down that isolation, and as you do that, you lose this island-ness, this uniqueness of whatever you're talking about. In the cases of the foxes, it's kind of the protection from the outside influences that can impact their health and life. So as more people come on boats, more access to the public, you look at the island that has the most of all of that, Catalina is the one that has the most problems, and seems to have had, over time, the most problems.

So in some sense, we're trying to hold back the rising tide. So the things that we do are trying to slow that kind of stuff down, and not let people bring their dogs back and forth constantly, or make sure we don't introduce something to the fox population that's going to cause a problem.

*Dewey Livingston:* So, you're talking about the early seventies, with your fox work?

*Lyndal Laughrin:* Well, I finished, actually because I started this job, I really didn't complete and turn in the dissertation until 1977. So I mean the field research probably went in through the middle seventies, '73, '74, '75, in that area, maybe.

*Dewey Livingston:* And so then you moved on from foxes, and I know you still pay attention; what are some of your other specific projects or interests as time went on?

*Lyndal Laughrin:* After that, I started helping a friend of mine on her graduate research, Mary Carroll, she was a graduate student at UC Santa Barbara, and then later became the director of education at the Santa Barbara Botanic Garden. And so I started being a field assistant with her on a project, and then from that, we got interested in the fire history of the islands.

We realized that when we started thinking about this as a Mediterranean climate, everyone kind of has this mindset that the vegetation evolved with a fairly frequent fire interval history. And so the vegetation has figured out different ways to survive that with adaptations and lifestyle strategies and reproductive strategies. And so we started thinking well, you know, we didn't really know of any fires on Santa Cruz Island, any natural fires.

Because, presumably, this vegetation evolved before all of us were all around, accidentally causing fires left and right, and at a much more frequent interval. So the idea is that in a Mediterranean climate, you'd get an interval of maybe 20 to 40 years, somewhere in there, depending upon your place or wherever, from natural fires. Any particular spot is going to be exposed to fire on that kind of frequency.

And so we decided we would look at that question a little more deeply, and try to look at all the islands and talk to people that had a long history and knew anything, and look at the records, or whatever. Basically, we could only find, I think, one documented natural fire in the last 150 to almost 200 years. That's quite a different timeframe from a 20 to 40 year interval.

So from that, we starting thinking about, well, what's going on with the vegetation in terms of adaptations. Has something changed so that they don't respond to fire, or respond differently or something, compared to their mainland relatives that still have the same influence in their lives, so to speak. And that kind of led us from there into disturbance ecology with some of the islands.

Besides fire, they were having a lot of feral animal grazing problems, and then starting to modify that by removal (of the animals). And so in some sense, fire and grazing are kind of disturbance factors, and so just looking at that. And because Catalina Island had so many things going on in terms of disturbance regimes, we ended up doing a fair amount of work over there.

*Dewey Livingston:* So it wasn't specific to Santa Cruz Island – your research?

*Lyndal Laughrin:* No, especially the fire stuff because in order to look at the fire responsive vegetation, we need to have some places that had fires, and nobody at that time was certainly very interested in letting us do a prescribed little research fire [laughter] out here in our backyard on the island, so we had to look for – take advantage of fires that happened accidentally. And there weren't that many on the other islands, but on Catalina, there were quite a few.

So we got to go over there. And for various reasons, you know, from airplane crashes to electric lines to people doing stupid things, and fires escaping from campfires, or whatnot.

*Dewey Livingston:* I've been on all the northern islands and Santa Barbara Island, and what has struck me is each one is unique; it's different from the next from San Miguel to Santa Rosa to Santa Cruz. But my impression is that if you were to look at Catalina and Santa Cruz, they appear to be, what would you say, the most similar? Is there anything to that? Other than the human impact.

*Lyndal Laughrin:* The human is definitely the major [laughter], the most obvious, in your face one now. The reason that they're probably more comparable is that they are both large islands. Catalina is the third largest. But the topography, Catalina has similar relief. It's got the up and down canyon ridge elevation stuff. It doesn't have a big central valley down

through the middle of it like Santa Cruz, but it does have a couple of fairly major big canyons.

But at the same time, it's farther south, a lot drier. The average rainfall there is only 12 inches versus 20 inches here. And it's also situated in a whole different oceanic current regime. So it's not influenced by the cold waters that come down off of the California coast, that go all around mostly Miguel and Santa Rosa, and then the northern and western parts of Santa Cruz. So the southern waters that come up off of Baja, the warmer ones, influence Catalina, and then come up and swirl inside the Southern California byte, and sort of kick around Anacapa and the east end here.

So Santa Cruz kind of sits in the middle of the intersection of those two big cooler/warmer ocean interactions. So that accounts partly for why we get this big diversity on Santa Cruz with microclimates, where the fog pattern is different in one area, the intertidal organisms are kind of with northern affinities on the west end, and down towards Smuggler's in the east they're more related to the Baja stuff.

So Catalina doesn't have that diversity going on. And as a consequence, you get more drier habitat kinds of things. You get the more coastal sage scrub, you get some cactus that's there that never makes it into the northern islands, especially the south-facing drier sides are even more extreme than our south-facing.

*Dewey Livingston:* So then did you mean to say that the east end, say, Yellowbanks and around there, were similar to Catalina?

*Lyndal Laughrin:* Well, certainly there are differences on the island here, but at the same time, you're still further north, so you are getting more moisture in the wintertime than, say, all of Catalina. So on Catalina, it's going to be the north-facing higher elevation slopes are that are going to have the chaparral/woodlands things, and that will be more comparable to the northern stuff here.

But, still, like some of the cactus stuff that is particularly striking on Catalina doesn't make it up here, even though the climate might support it.

*Dewey Livingston:* Back to fire, did you find any evidence that Native Americans burned?

*Lyndal Laughrin:* We didn't. Our involvement with fire research didn't go that far – other than looking at what people have written about it. We know they used fire on the mainland, the Chumash did, on the coastal areas. The island and mainland Chumash interacted a lot. They had this great canoe technology and knowledge of the ocean and interaction back and forth (between islands).

So one would have to assume that the island guys certainly knew they were using fire. And, certainly, on a clear day, if you were on the island here, you can see if there's a fire going on the mainland, if they're doing it right across there. Whether they actually did it, certainly what we were doing couldn't have answered that question.

But there is, like anything else, once you do something, there's another generation of interaction of people looking to build on that question.

So we have the current guys that are working on going back in time with fire history and looking at not only going into the prehistory timeframe, which would involve the Native Americans, but even before that to look at after the last glacial episodes, so to speak. So we just had a professor from Northern Arizona State University, and his colleague from Southern Illinois University out here, and they were doing core samples.

And they worked here and on Santa Rosa, and they take a core of soil and can look at, primarily, the pollen and the charcoal in there. They can date it and identify stuff, so you can see what's happening over time. So in the right time frame, you could maybe see a difference in the kinds of plants that you might be able to attribute to the Native Americans. Or you could see a difference in the amount of charcoal; maybe the frequency that might be different than what happened before.

So that you could possibly say, "Okay, this could probably be responsible from those guy doing something out here versus a natural [event]." So we can't answer that question yet, but people are working on stuff that might throw some light on it.

*Dewey Livingston:* Did your work with Mary Carroll result in publications, findings?

*Lyndal Laughrin:* We did do some publication. We've had a long history of doing a symposium related to work on the islands. It started back in the sixties, actually. And I forget what number we're on now, but we've had them at usually about a five-year interval, roughly speaking. And so that's been a great opportunity for people that have worked on the islands to present and publish their material. So we had a paper in there with the fire work.

*Dewey Livingston:* So did you move on from that, or are there other projects?

*Lyndal Laughrin:* Well, I've continued to do stuff, mostly the vegetation with Mary. I've continued to work with her. She left the Botanic Garden; she's been working in the consulting business, and she also teaches classes at Westmont College. And so another project that got started out here through a woman from Arizona State University, who was interested in looking at the effect of feral pigs under coastal live oak trees.

She set up this whole set of experiments, where she's got these exclosures under the oak tree, and next to it, there's a similar piece of plot marked out with no fence around it so the pigs can root around in there, but they can't get inside the exclosure. And then a duplicate set outside the canopy of the trees, so away from the trees, so you have, again, an exclosure and an open spot. And then that whole configuration is replicated under ten different oaks, starting in the canyon down towards the harbor and going upwards in the Central Valley, a couple miles up to the west. And so she's following this over time while the pigs were out here.

She did that for her Ph.D. dissertation, and finished that in the early 90's. And she left academia and research, and she hasn't really pursued it, but we knew that some day, we were probably going to get rid of pigs, so she stopped what she was doing before that happened. And so we always felt it would be nice to continue that project, even though she wasn't particularly doing it.

So I encouraged Mary to start using her class, when they come out, as a field exercise, and teach the kids how to take data and do sampling, learn how to manipulate data and do statistics, and be able to look at what people have done in the past, add your data to it, and continue the story and make the comparison.

And so we've been doing that, and now we're into the phase, where a couple of years ago TNC removed the pigs, and now we're watching over the years, that part that was enclosed and was protected, and had an amazing array of species and stuff, fill in. It began to look very different from the bare, open, under-the-tree part that the pigs had been exposed to for all these years. So now we're looking at essentially the whole island now as a big enclosure. Now there are no pigs, so the part that has been open all this time is now going to start moving towards the part that's been without pigs for the last 15 years or whatever.

That's one of the values of the field station sites and reserves. I mentioned yesterday, we have these people that come and go over time, but you do have their datasets, and in some cases, you actually either have markers, or with GPS technology, you can certainly have a very precise idea of where they did the work.

So a real value to a lot of stuff is the longevity and the ability to make a comparison over a longer period of time. Because a lot of times, people – traditional graduate work, if it's a master's is two or three years, a Ph.D. maybe five or six for field work. So unless you've got a vision that that's going to be your life project, a lot of these things have this shorter cycle, where people are interested, and then they go off on something or somewhere else.

And in a lot of cases, they take a left turn and do something totally different. I mean in some cases, they come back and continue to work, but not always. But if you do have the access to the data, and know where it was taken, you do have the ability for somebody totally different in the future to come and build on that. And so a lot of field stations, with a long history on sites, are trying to encourage that kind of legacy.

*Dewey Livingston:* So that's a role you take then in trying to manage it?

*Lyndal Laughrin:* Yes, as the manager and director, so when people come and want to – particularly classes, where if you can make the thing simple enough, so you can get reliable information, and then you can have people doing it over a period of time. Because the professor will like to bring the class back repetitively, so you don't have the same kids. And it

makes a great, wonderful, teaching tool, too, because it gets their interest.

It captures it much more quickly and deeply when you get a perspective of what you're doing and why you're doing it, and not just, now I've got to learn how to count plants and I don't know why it's useful, but if you can relate it to what people have done in the past, and see how it's changed.

*Dewey Livingston:* Anything else that you took an interest in up to the present?

*Lyndal Laughrin:* Well, now, originally, when I started my graduate work, I started with birds. That's the whole reason I switched from marine biology. And I did my master's on birds, and now I've kind of completed the circle back to bird projects, again. So I'm working on the wetland project that's going to restore the wetland at Prisoners' Harbor. I've been doing the bird monitoring for that project, and then I've been involved in an island-wide, community bird transect that we do periodically.

But as the Reserve has have gotten busier and busier, we're just mostly keeping the field station alive and helping people, getting them to their field research areas and with their projects; the amount of time, for my personal things dwindles.

*Dewey Livingston:* So you have some times where you can suddenly get a lot done, and other times, you are stalled?

*Lyndal Laughrin:* Right. Exactly.

*Dewey Livingston:* Is it part of your responsibilities here? So, for instance, the bird work you're doing down there, that's on your own time? How does that work?

*Lyndal Laughrin:* Well, in my actual job description, they have about five or six percent time allowed for research related things. So the job is not to do research here, it's to facilitate and accommodate education and research programs. But at the same time, and I think this is true for the Reserve System in general, that there is an advantage and an asset to having, more or less, the onsite most responsible person, the manager or a director, have some insight into research, what people are doing and why they're doing it. I think it just make the programs better and facilitates the clientele, so to speak, support.

*Dewey Livingston:* That's certainly in the Reserve System's interest.

*Lyndal Laughrin:* Right. If you just hired some guy out of business school to make sure the cars are used efficiently, and the buildings are held together – I mean you certainly need those people onboard, also. But I think the overall kind of vision and philosophy of what's really going on, why the program is important to the University and the public and the state, I think that kind of broader perspective is an important part of it.

*Dewey Livingston:* Well, why don't we call it a day?

End of audio file 2; total time 00:54:53

Audio file 3, Sunday morning, May 8, 2011:

*Dewey Livingston:* This is May 8, 2011 and this is the third installment in the oral history interview with Dr. Lyndal Laughrin at the Santa Cruz Island Reserve field station. We've been talking about the field station history, and I'd like now to go into work that's been done out here and if you could separate out perhaps a handful of projects that have been going on here either ongoing or ones that have come to some sense of completion that you think might be particularly significant, might have led to much better understanding of certain aspects of the island or such.

*Lyndal Laughrin:* Sure. I went and did a little bit of homework in thinking about this and what we already discussed. I thought I should fill in a little more completely just what the Reserve is, the role, that kind of thing and maybe start off by quoting the actual mission statement for the Reserve System, which had a minor revision they just approved, I found out two days ago.

“The mission of the Natural Reserve System is to contribute to the wise stewardship (and that's the new change, it used to be the wise *management*, now it's the wise *stewardship*) of the earth and of its natural systems by supporting university level teaching, research and public service of protected natural areas throughout California.”

And so you can see, the broader mission includes teaching class and public service outreach components and so we start with the research. You know, we mentioned already the date of the establishment, so we've got forty-seven years, approaching our fiftieth anniversary, so to speak. So I just looked up some of the numbers we might throw out to talk about our accomplishments and in our bibliography that we have associated through our Reserve System for Santa Cruz Island. It seems we have close to a thousand publications over that timeframe and there are probably some older ones from before related to the island that could be incorporated. Also, almost 40 master's theses and actually about 40 Ph.D. dissertations over that timeframe, so that gives some kind of a quantifiable idea of product here, at least.

In terms of the value and the importance of research, sometimes it's hard to assign that from our short term and immediate perspective, maybe. Definitely one aspect of the research here – I think I touched on that a little bit before, was the value of long term projects. You know, you might not get a National Academy of Science publication immediately out of some short timeframe work from those guys, but if one looks at the bigger perspective and with the ability to put that perspective with future research there can be greater value. So in that category, actually, you may have met the woman last night here, Dr. Nancy Vivrette.

*Dewey Livingston:* I saw her.

*Lyndal Laughrin:* She's been working here since the early '70s, did her Ph.D. out here on coastal bluff maritime vegetation out at Fraser Point, the west end of the island. And she's out here on her annual trip to go out and do

her plant transects and monitor the changes there, so that's a pretty amazing data set.

There's been a long history of work on the island jays starting with Dr. Charles Collins who was at Cal State Long Beach and he had a succession of quite a few graduate students over the years and he also started in the '70s. He recently retired and now Dr. Scott Sillett with the Smithsonian Institute and Dr. Cameron Ghalambor from Colorado State University have picked up the baton, so to speak, and they have a couple of graduate students, probably the number's about four now since they've taken over that have been working on jays. I think this includes your daughter as a field tech for one of those students right now currently out here.

I mentioned the oak pig plot work that was started with Dr. Diane Peart at Arizona State University and that work is being continued with both myself and Mary Carroll who teaches at Westmont College. That's a long term study looking at the effects of feral pigs, particularly related to coast live oak and the habitat and understory, and so we have a progression from the time when pigs were here, what was going on during the eradication, and now we're following up with a period of time with pigs having been eradicated.

Dan Richards with Channel Islands National Park has a fairly long-term data set now looking at the intertidal, particularly at black abalone, and has several sites around the coast.

Another fairly major [study] starting to have a long-term data set, also for intertidal ecosystems, would be the PISCO group, which is the Partnership for Interdisciplinary Studies of Coastal Oceans. It's a consortium group with folks from Oregon State, Stanford, UC Santa Barbara and UC Santa Cruz. At Santa Cruz Island particularly, Drs. Steve Gaines and Carol Blanchette, professor and research scientist at UC Santa Barbara, have sites out here, about four sites around the perimeter of the island. I mentioned the difference between the two ocean current temperature regimes here, so they've got sites within those and then comparable sites on the mainland, so it's a pretty broad study across much of the western coastline.

And then a fairly long-term history of archeology with Dr. Micheal Glassow at UC Santa Barbara. He just retired. He actually started here just after finishing his graduate work at UCLA and was a newly hired professor in anthropology at UC Santa Barbara in 1969 or 70. He has a history almost as long as my own, visiting the island here, and now he's just retired and a new professor, Dr. Lynn Gamble, just transferred in. UCSB recruited her from San Diego State University and she's also an archeologist that works in the Chumash group history and has already started her project out here. So she'll be continuing on with that kind of stuff.

Then you wanted to highlight some of the more important studies?

*Dewey Livingston:* What are ones that you particularly might have an interest in?

*Lyndal Laughrin:* Well, I think the jay work particularly was of interest and certainly some good stuff has come out of that. You know, when the work first started with those guys, the jay was considered a subspecies of the mainland scrub jay and part of the work out here brought out the differences and led to the separation and elevation to a complete species status. There's been interest in looking at this jay and comparing it to the Florida jay, which has a social reproductive system using helpers, that is where the non-breeding parts of the population sit around and help with the nests and territories of territory holders.

Gary Roemer's work on the island fox – he was a grad student from UCLA, did his Ph.D. work here and now is a professor at New Mexico State University in Las Cruces. It was during his tenure as a student working out at the west end that that he developed the whole idea that golden eagles were the primary cause of the decline of the fox population here. He was one of the first ones to detect that and start looking at possible reasons of what was going on, and the first one to notice that golden eagles primarily seemed to be the culprit.

*Dewey Livingston:* And when was that?

*Lyndal Laughrin:* That would have been in the early '90s. I'd have to look up the date that he actually started, but that's what he was doing.

And I already mentioned Dr. Mike Glassow, he's probably the preeminent Chumash archeologist for the current timeframe, certainly, and did a lot of work here on Santa Cruz Island. Then one of his graduate students, Jean Arnold, from UCSB and now a professor at UCLA, continued a lot of the archeology. She's become fairly well known and she's the one that worked out the concept that Santa Cruz Island was basically the mint production system for the little shell bead that was used in their trade bartering system.

*Dewey Livingston:* Now, were they looking at sites all over the island or focusing on particular areas?

*Lyndal Laughrin:* It depends on their interests. Dr. Glassow's work, a lot of it, was on the earlier timeframes and he was also very interested in looking at food resource use, particularly in the intertidal, the abalone. He did a lot of work out at Punta Arena on the south side and in the Christy area. Also had grad students working out at Fraser point.

Dr. Jeanne Arnold worked down at Prisoners' Harbor a lot and out at China Harbor. The part with the shell bead and the chert drilling production to make the beads, those projects did involve fairly specific sites because those are the areas where that kind of work was concentrated.

*Dewey Livingston:* There were mines, so to speak, up on the Montañón?

*Lyndal Laughrin:* Yes, that would be the chert mines because the chert is formed where the Monterey shale and the Santa Cruz Island volcanics butt against each other and the kind of pressure and temperature regime formed this rock that forms a very sharp edge when you fragment it, the type

of rock that became the primary source for their cutting, blade, knife, point and drill types of materials and tools, because we really don't have anything like obsidian on the island. That kind of stuff would have to have been traded back and forth to the mainland, so this was the only on-island source of a type of rock that would really produce a nice, sharp edge and hold it for any time.

*Dewey Livingston:* I would think that would be an location of particular interest, maybe even a study of island ecosystems related to that [natural] barrier there.

*Lyndal Laughrin:* Yes, there's a diversity of sites around the island and, right now, there's currently a crop of grad students from UC Santa Barbara. They're working within the more historic timeframe, so they're looking at the village sites that were occupied contemporary with the European humans starting to show up in this part of the world.

Dr. Adrian Wenner and Dr. Robin Thorpe – Adrian Wenner was from UC Santa Barbara and Dr. Thorpe from UC Davis. They worked on bees, the feral honeybees and the native bees, and they initiated the eradication (honey bee) and were successful in removing all the feral honeybees from the island. They have also done work looking at what the native bees were doing during the timeframe when the feral bees were here and then what's going on now. The feral bees have been removed and now they're looking in particular at things like pollination interactions with plant species, with native and non-native plants.

*Dewey Livingston:* How were the bees removed?

*Lyndal Laughrin:* Basically, the strategy is to kill the queen for the colony and then that stops the reproduction and so the colony will die after some period of time. So there were various techniques used to locate the hive, find a way to do in the queen.

You know, it's sort of like the feral animal eradication programs for sheep and pigs. The first ones are easy and the last ones are very difficult, so for some of the more remote hives, they actually ended up with a technology where the foraging bees would take a small quantity of the poison that had been introduced into a little feeding dish back to the queen and building that up over time by feeding her, then that would kill her. You know, some of the easily gotten-to hives, you could actually go in and do it physically.

*Dewey Livingston:* Were the hives located all across the island or were they localized in the Central Valley?

*Lyndal Laughrin:* No, they were pretty much all over the island. I mean, there were varying densities, probably by habitat or whatever. But yes, because they'd been feral for so many years – there's not a really accurate introduction date, but probably something to do with when the ranch was going full blast here in the valley and they had orchards and vineyards and probably introduced the bees for pollination and probably as a honey source.

*Dewey Livingston:* Fascinating, the bees.

*Lyndal Laughrin:* Yes. Let's see, what else here. Dr. Nicholas Pinter did his Ph.D. work out here, he was from UC Santa Barbara. He was a coastal geomorphologist in the geology department and he now is a professor at Southern Illinois University in Carbondale.

He and his graduate students have done quite a bit of work with landslides, effects of El Niño rainfall years on surface features and slumping, and then just recently he's paired up with Dr. Scott Anderson from Northern Arizona University and they are doing paleoclimate and fire history studies by drilling coring samples and looking at the pollen and charcoal levels over time and depth. They're also working on Santa Rosa Island with that same project.

Then we should mention, to support research and to get the results out and have it available, we've had a series of what we call the Channel Islands Symposium over the years and we just in 2008 had the seventh one.

So just to refresh my memory, I quickly checked and I can't remember the total publications, but 32 of the papers in that [most recent] volume were from work through the Reserve on Santa Cruz Island, and in 2003, which was the previous one, the sixth one, 28 papers or presentations in that one were [based here] – so usually a pretty good percentage of work in those symposium are [Santa Cruz Island-based]. The last symposium, we dedicated it to including all the Mexican islands, so we had folks from Mexico that had been working in the gulf islands and along the Pacific coast.

So it's a great thing to bring all those people together. Usually it's on a five year period and an opportunity to present with an interdisciplinary kind of approach because we have – you know, everything's history, geology, archeology, any kind of biology you can think of and also lately a lot of sort of even a couple of workshops on policy and that kind of stuff.

*Dewey Livingston:* I was at the 1999 and 2003 symposia and noticed that they started bringing in the Mexican islands in 2003, and I would think that there would be a lot of interest from the island people up here.

*Lyndal Laughrin:* Definitely.

*Dewey Livingston:* They have their own challenges down there.

*Lyndal Laughrin:* Definitely they have their own challenges, but you know, islands have a community of interest that revolves around just the whole idea of being an island no matter what part of the world they [are in], what climate and political affiliations they might have.

*Dewey Livingston:* Just as an aside, every time I'm on this island, I remark how you can forget you're on an island here because it's so big.

*Lyndal Laughrin:* Well, that's the thing about Santa Cruz, especially with this big valley, you could be over in the San Ynez Valley or up in Ojai anywhere, you know, the oak, grassland, chaparral habitat, coastal sage. It is a difference. If you compare all the islands, they each have their own little flavor and ambiance and if you're out on San Miguel or Santa Barbara Island, you know you're on an island. You pretty much see the ocean and smell the ocean and hear the ocean and feel the maritime air almost anyplace.

Here or Catalina, or parts of Santa Rosa, if you get far enough away and you're down in a valley out of the view shed of the ocean, you can change your feeling completely.

*Dewey Livingston:* And yet, this is still an island and it still reflects a lot of those unique aspects of being an island despite being so big.

The Channel Islands Symposium, what were some examples of your personal participation in those?

*Lyndal Laughrin:* Well, in the last few years, I've been part of what we call the coordinating committee that basically sponsors and sets it up and puts out the notice and encourages people that we know are doing work to think about giving a presentation, doing a paper for this symposium publication volume. I've certainly attended all of them and I've actually given papers at quite a few of them over the years.

In the early ones, I did one on the fox work and we've done one on the fires, feral animals, vegetation, and did I one on birds, probably in 2003. And then the last one, I presented a paper coauthored with Jeff Howarth who worked out here – he was a grad student at UC Santa Barbara in the geography department working on coupling history, historical ranching activities, patterns of use, degrees of use on different parts of the island, looking at how that relates to vegetation patterns.

The paper we presented was related to some of the history of the cattle ranching and the use of the island seasonally with parts of the cattle herd. Jeff's now a professor at Middlebury College in Vermont. Hasn't been out to the island for a few years but I'm sure he still has his love of the island in mind and he'll get back here sometime soon. Most people do once they set foot here – doesn't take them long to want to get back.

*Dewey Livingston:* I spent a couple of days with him here and he was a fascinating character, and for my interests, I really appreciated the look at detailed historical documentation and bringing that to the present.

*Lyndal Laughrin:* Right. He was very good at chasing down old documents, old maps, he spent time back in Washington going through stuff at the national archives and that kind of thing.

*Dewey Livingston:* All right, you had some more notes.

*Lyndal Laughrin:*

Yes, I wanted to briefly touch on the other two parts of our mission, the education. I think I did mention that even though this is a UC program, we're certainly available and receptive to having other people use the place. So in the longer, broader perspective, probably it seems like the long term average is probably 60 percent of the use is from UC people. And then the other 40 percent is kind of all over the place and then that would vary depending on whether you're talking about classes or researchers or that kind of thing.

So, we are open to colleges, junior colleges, community colleges all around the country and a lot of them send classes. Most of the classes tend to be a field trip associated with a class that's given on the mainland at the parent institution.

We mentioned already, the origin of this place was a dedicated class that came out here for a longer period of time, the UCSB summer geology school. After it was incorporated as a broader field station, then UCSB continued to send their summer geology program out here quite often, and usually that was a six to eight week class given here. The kids would come and basically live on the island for that whole period of time and do the whole course here. We've also had archeology field schools in the summer sometimes.

There have been a bunch of classes that they try to do during semester and quarter breaks that are short but very intense, maybe a ten or twelve day class. Usually, these tend to be in field methods of archeology or geology or something like that. Another fairly unusual and, I'm not sure, possibly unique class that uses this place quite frequently is a program started at UC Santa Cruz with Dr. Ken Norris.

This would have been back in the '70s. I mentioned, he was one of our founding fathers for the Reserve System but he was very forward thinking about natural history and basically he come up with the idea that they should have a class that exposed kids to the natural diversity, natural history of California.

So they have a class at UCSC called Natural History Field Quarter and it's the only class you take for that whole quarter, probably 16 units, and it's usually about on the order of 20 kids and essentially, they travel around the state all together and stay at different places for fairly long periods of time. They use quite a few of the Reserve System properties, including Santa Cruz Island.

And usually they'll come out here for like ten days and it's very intense, all the kids divide up and pick a subject or a topic and research it, have on-site experience with it, try to talk to people and get local knowledge and current information besides what they can find in literature or other published works. And then they give oral presentations to the rest of the group so that, by going through the whole group, you cover lots of topics.

It ranges from what's here – biology, archeology, that kind of thing, to social and public issues that happen to be current maybe like with feral animal eradication or the establishment of marine reserves or the

formation of the park, you know, kind of the politics involved with that kind of thing. So, it's always interesting to come down after dinner and listen to the kids give their little versions of what they figured out.

*Dewey Livingston:* Well, the island is a superb laboratory –

*Lyndal Laughrin:* Yes, it's a wonderful natural laboratory, natural library of resources and all you have to do is go out and sit on the hillside and you can immerse yourself in it. If you're observant and patient, you can come up with some pretty wonderful educational opportunities.

And then the other kinds of education we kind of lump into our public service, public outreach, and that would be the K-12 types of things, adult education where botanic garden or museum of natural history groups would come out and spend a few days and learn about the island, depending on their interest, the flora or whatever.

And then we do get a lot of use through agencies, the Park Service, USGS, The Nature Conservancy will have people that they are supporting for projects stay here. A lot of that will come under resource management and stewardship.

As I've also mentioned, we're not the owner of the island, so we're not obligated to make decisions about what to do about the management, but we're certainly supportive of it. You know, the good health of the island is certainly an important component of what people do out here and why they want to be here and the future for these kinds of programs. So we're housing people and we're providing resources and information that goes into helping them evaluate what they need to do, how they're doing it, that kind of stuff.

Some of the other Reserves, where the university actually owns the property, the staff – my colleagues and peers – have to have more hands-on themselves for running programs and finding funds for not just their own stewardship. Also, some of them run more formal K-12 programs where they're actually having classes for kids. It's a little easier when you can just bring your school bus up and drop the kids off at the property for a couple hours and then they all go home whereas here, it's a pretty big effort to get out here in the boat and you have to spend the night at least.

You know, the limited facilities compromise the other things you can do, so we don't do as much of that as some of the other reserves, but we try to incorporate it if we can because obviously if we don't connect with the youth and the young folks at that level we're kind of losing a whole lot of things in the future because we can't keep them interested or cultivate their interest and capture them.

*Dewey Livingston:* Yes, that's the situation where even if you get just one kid out of the class where it changed their life.

*Lyndal Laughrin:* Yes, and there's no end of statements like that we could generate from groups that have gone through here where you see dozens of kids and

nowadays some of them want to know how good the phone service is so they can text their buddies or they've got their iPod plugged in, but it's pretty amazing, two or three of them will ask questions and just be totally amazed at what a difference this place is from their normal lives and you can just tell it does get their attention and that makes it all worthwhile for the whole program.

*Dewey Livingston:* Do groups, whether it be from the kids to the adult groups, do hands on habitat restoration, for instance?

*Lyndal Laughrin:* We have had that. Working with The Nature Conservancy, we have a couple programs that have sort of formally taken the lead in actually managing and overseeing those things, so again, I don't have the staff and the resources and the time myself or with my staff to run these programs, so it works really well when we have somebody else that can do that and then put the kids into that.

We have a group called Channel Islands Restoration led by Ken Owen and they've been very good about connecting with high schools and youth groups and then working with TNC in partnership, they've been working a lot in the Prisoners' Harbor drainage with eradication of non-native species, plants particularly. So that's been probably one of the really good programs in the last few years.

So, certainly the first level is just letting them get to the island, but having something to do like that where they see a result and see how it makes a difference gets even more of their attention and lasts longer and goes into their mindset of why it's good to have these areas and protect them, the whole idea of preserving biodiversity and natural resource management and that kind of thing.

*Dewey Livingston:* There are a couple of other topics similar to the ones you've been listing here that I'd been interested in learning a little more about. One is mapping. I know that many or most or even all of these disciplines require a mapping component and how have you watched that evolve over the years while you've been here?

*Lyndal Laughrin:* Well, technology and that part of the world has changed a lot. You know, in the old days, you were with a pencil and paper sketching little things, maybe using a compass, referring to a topographical sheet. There's a long history of maps for the island going back to what Cabrillo maybe sketched, but certainly in the 1800s.

You know, once California became a state, the Coast and Geodetic Survey [produced maps and have been] improving those over time. And then definitely the rise of GIS and GPS technology has changed that whole world, so now you have the ability to, with a little extremely portable unit, get amazing accuracy.

If you want to go to it, you can get super amazing accuracy with larger, bulkier equipment and that kind of thing, but with just the little not-that-expensive handheld things, at least for most field work, you can get more than the precision you probably need most of the time. And digital, aerial photography has been a changing thing, so there is

some early stuff that's available for comparing over time and now there's more attempts to do it at more frequent intervals. There's satellite imagery. There's Google Earth, you know. You can just kind of go crazy with this stuff now and the availability and the ease –

*Dewey Livingston:* Do you have any use for the USGS topos other than as a historical artifact?

*Lyndal Laughrin:* Oh yeah, people still use those. I mean, definitely there's inaccuracies as they haven't published a new series that's got all the new changes, but as a base, you know, still a lot of people, well particularly the geologists I know, when they're out in the field, they pretty much still use those things to map on 'cause even with the geology, there's areas where it's kind of like taxonomy. Technology's improved and with it your ability to define things in more subtle and smaller detail over time, so there's geology here that people are refining all the time just like they're refining differences between species.

*Dewey Livingston:* Is there an effort to consolidate mapping information to make the most up to date map of Santa Cruz Island?

*Lyndal Laughrin:* There's periodic interest in that. Funding is always a problem, and some of it's just driven by a particular interest like recently The Nature Conservancy did a big thing to do an updated map on vegetation. And they've incorporated into that the nonnative plant distribution. So now some of that stuff can be used by other disciplines or people.

I think the park tries to find funding periodically to do the aerial imagery photography. There's so much available, in certain ways, I don't know if the idea of having one big map with everything on it might not be a very productive concept. There's a big map and aerial imagery component at the UC Santa Barbara Library. I know you can get amazing satellite high resolution stuff of different color wavelengths and all this at recent and frequent intervals, so depending on what you're interested in – like they had these programs around here that are interested in the sea surface temperature change, so they're looking at constant change, seasonal, looking at change over time.

Nowadays, the big interest is in climate change, to utilize a lot of spatial imagery stuff, change of time, trying to relate that to what might potentially be happening.

*Dewey Livingston:* It has always appeared that the major impact historically on this island has been its use as a ranch, sheep, cattle, and then into pigs. I'm interested if you could go into a little more detail of any particular aspects of island-wide recovery efforts; observations of recovery, problems like fennel and things like that.

*Lyndal Laughrin:* Well, there are projects that tried to quantify that, so there would be a set of transects and some imagery that shows the status during the grazing era and you'd have to look at those if you were trying to tease out whether it was sheep or pigs or cows, you know, in order to see what's going on.

And there are some people that are interested in continuing that as long term programs, to see the recovery changes over time once all those animals have been gone and as we move forward and more and more time elapses in different parts of the island, looking at the degree of impact and over time what's happening. So that's available. And now, obviously, some of that involves the increase in nonnative plants and so there's an interest now on dealing with those guys. That's where a lot of resources and energy, effort are being put.

I guess there'll probably be some aerial, some visual stuff you could do, but I don't think anybody's actually doing transects comparing nonnative to native in the areas where they are doing the eradication 'cause right now, they're more or less doing mostly eradication of individual species and targeted individuals.

*Dewey Livingston:* Is that more The Nature Conservancy doing that?

*Lyndal Laughrin:* Yes, that's all being driven by The Nature Conservancy.

And that is a problem as time goes on, more and more of the native stuff is being reestablished so how do you deal with an area that's got a high mix of natives now with non-natives, unless you're going to do it one on one with the plants, you can't. I mean, you can, but you're got to realize you're going to sacrifice a lot of natives if you're going to do a broadcast spraying. Like for instance, the fennel, you have to evaluate how much other stuff you want to kill in order to kill fennel in certain areas. There still are areas where fennel is the most dominant thing so you wouldn't be sacrificing much, but fennel has moved up into other areas in smaller numbers and more native habitat with it.

*Dewey Livingston:* Is there a pretty good representation of native grasses though on the island and you're seeing a recovery in those?

*Lyndal Laughrin:* Yes, that's been pretty encouraging.

*Dewey Livingston:* And does the fennel tend to continue to spread. I suppose the native grasses don't have much defense against the fennel, but you're also saying that there's quite a mix?

*Lyndal Laughrin:* Well, the native grasses are perennial, so once a perennial plant gets established, it's pretty hard for a nonnative to take over that space unless something disturbs it. And so a new fennel seedling isn't going to be able to start in the middle of a bunch grass clump. And so as the natives built themselves up more and more, then there's less space for the non-natives.

The problem was in the disturbance regimes, whatever factor you're using there, like the pigs, when they're rooting up and opening up a new site, then usually the non-native things are most adapted to quickly re-colonize and start up, so now without the pigs, which were kind of the last major disturbing element; really the only disturbance, natural elements, would be fire and flooding. So down in the riverbeds

where the stream channels are getting disturbed annually with the amount of flow which moves everything around.

Those are areas that non-native plants can sort of still have a good opportunity. Roadside edges where you're grading roads all the time. First could be another disturbance that could open up areas. So those are the future potential interactions that you need to be considering.

*Dewey Livingston:* Yes, still new invasives showing up like we have just found.

*Lyndal Laughrin:* Yeah, right, I mean that's the thing, as I mentioned before, the more we break down the isolation component of islands, by our improved transportation, numbers of people coming and going, and people coming from other areas without paying careful attention to what they're wearing and what might be hiding in there, that kind of thing.

We were just recently on a trip to Antarctica and they have very rigorous methodologies for when you leave the ship and go ashore, where you basically have to vacuum everything, vacuum your camera bags, you have an inspection after you've done that before you're allowed to leave the boat and go ashore. We haven't come to that yet here, but you know, it's all designed to prevent these kind of introductions of new things into systems that have been stable for long periods of time without such stuff.

*Dewey Livingston:* All of this information over long periods of time, short periods of time, even going through generations of people doing this work, how is that coordinated in the context of the field station and the reserve system? I know we have the California Islands Symposium as one way of at least getting people together to talk about it, but there's tremendous amount of information.

*Lyndal Laughrin:* It is and that's been a perennial problem of field stations around the country. You know, ways to wrestle with how do you keep track of what's going on, how do you make it available for users, to have something to make available for people that need it. Oftentimes if you are in a certain discipline, you know who else is doing it. You read the literature and you keep in touch with that kind of stuff and are a little closer to the source, so to speak. But if you wanted to know something, like you're a management type and you wanted to know something about someplace that you weren't that familiar with – where do you find the information or how do you track down the last guy that might have worked there that might know the best, latest stuff but hasn't published it yet?

And so the UC Reserves are part of a bigger network of field stations for the whole country called Organization of Biological Field Stations, OBFS. And especially now with website, Internet, archiving and retrieval capabilities, [there is] bigger interest in metadata, basically the data about where the data is, so who did the work, when did they work, where did they work, what's your latest contact information if you have any.

It's developing to the point where you try to actually have the data itself available, which is a big mindset change because researchers are kind of paranoid, because a lot of times their lives and careers depend on what they publish and their tenure and their promotion tracks, so they're not very used to just handing out everything to everybody 'cause they want to keep it and publish it and then get a publication and all that stuff.

But actually NSF now is starting to require that if you submit a proposal and want money from NSF that you have to, within a fairly short timeframe, not that many years I think maybe three or something like that, you have to make your data online available.

Some of the things that we've done so far, I'm not quite that far yet, but we have an online bibliography that we try to keep current, putting in and including the grey literature like reports and stuff that's not really published in the journals. We do that through the Reserve System so each one of the reserves has a place in there that we annually input the new stuff. So it's up to us to keep it up to date, so depending on how good we've been at doing that, you might have the latest stuff in there. That's where we got that one number for how many publications were related to Santa Cruz Island during our existence. So that's one way.

We do have a data set of just users that we try to have. We have an online application that's got this data in it so that you can go in there if you know the name or with keywords, i.e., if you want to know who's worked on starfish on Santa Cruz Island, you know, and you can throw that in there and see what pops out.

*Dewey Livingston:* A database that goes back to the beginning, from paper records?

*Lyndal Laughrin:* Well, that's the trick, we have to go put in the stuff. The way it works now is if you want to do a project here, you need to enter your data in there, but the previous stuff before we started the system, it's more or less up to me or a part-time person I can hire to go fill in that because obviously that system didn't exist.

*Dewey Livingston:* So there's a paper archive of all the activity?

*Lyndal Laughrin:* There's some paper stuff scattered around. It's not probably as well organized as it should have and could have been, but there have been various attempts over the years. We had a big effort with coordination between the (Channel Islands National) Marine Sanctuary and the Channel Islands National Park and the museum (Santa Barbara Museum of Natural History) and the Reserve a few years ago to put everybody's best idea of the bibliography together. We had that at the museum of natural history for a while and that was good up until about '95 and then people cut off and nobody added to it and now I can't even find it online, so I'm not sure what the status of that is.

*Dewey Livingston:* Since we've been talking about groups and university researchers, etcetera, are there any interesting stories, as if we were sitting around a campfire, of some mishaps or something that comes to mind that

you'd like to tell about, even if it's more on the lighter side? I saw the picture of all the car crashes, the vehicles in the gullies and things, but what are some of your favorite stories from your experiences here?

*Lyndal Laughrin:* Oh boy. You mean just from my experience out here, not necessarily related to research?

*Dewey Livingston:* Yeah, you've seen hundreds or thousands of people come through ranging from the competent to the probably –

*Lyndal Laughrin:* Exactly. I've always felt the privileges and the bonus of this job is it's terribly interesting just by the diversity of people and projects, so I can learn about archeology following the archeologists around in the field and same for the geologists, even though I'm a biologist. You know? Let alone their personalities, just their knowledge in their fields.

Probably when you think about the people that have come and gone that I've interacted with, probably the most impressive person that I've ever dealt with and given a tour around the island to probably would be Stephen Hawking. He actually was out here twice and I took him around in the truck to different places. That was a pretty amazing experience. The Nature Conservancy had Margaret Thatcher out here one time and I got to interact with her, meet her.

She was only out for a short period of time on her way to another gig. I think it was when they were having the dedication of the Ronald Reagan Library and she stopped here to see an example of California conservation arranged through The Nature Conservancy. But she was totally formally dressed and had her hair completely solidified with hairspray.

So even in the open jeep, driving up the hill to look at some of the island, you know, not a wisp of hair moved. Back in the time with Dr. Stanton here, I met Barry Goldwater. He ended up out at the ranch, stayed here briefly during the time he was running for president. He was a guest of Dr. Stanton's.

Jane Fonda, she used to have a ranch up on the top of San Marcos Pass above Santa Barbara for inner city kids, underprivileged kids, and she had approached Dr. Stanton with the idea of having them come out here and be on the island for a period of time and he allowed that and so she made a couple of visits out here and spent the night at the ranch and I was down to dinner with her. So yeah, over the years, there've been –

*Dewey Livingston:* You ever have anybody show up who was a complete disaster? Don't have to name names.

*Lyndal Laughrin:* I wouldn't say we've had complete disasters. We've probably had a few that it would be nice if they didn't come back again, but we didn't have to call the airplane immediately and turn them right around and send them off. I think that's part of the job and we do have a system – people send in an application and have to prove that we think what they're doing is reasonable and important and once in awhile,

something will slip through the cracks that maybe it's not as important and as reasonable as they might have thought it was, but they're already here by then and so you just sort of deal with them and not have them back again.

*Dewey Livingston:* People showing up without any food?

*Lyndal Laughrin:* Not usually. You know, there's enough interaction going on that people are aware before they come out of what they're getting into, pretty much. It was more likely that one would run out of food because there used to be times in the past when we relied on the Navy boat program that serviced their little base here for transportation. They were quite generous, but the boat only came a couple days a week and if the weather was bad and the boat couldn't come, they didn't come the next day if the weather was good. They just waited till the next scheduled day, so you took a chance of maybe if you had wanted to go home Monday and the boat didn't come, you might have to stay till Friday, which was the next boat.

So there were a few times where people got caught that way and we had to kind of scrounge around for food but usually there's extra stuff left behind by a previous group and we keep a big freezer so even if it's not what you thought you wanted, there's certainly something there that's going to keep you alive. That's never been a problem.

*Dewey Livingston:* With the death of Dr. Stanton, what type of changes did you see with The Nature Conservancy taking ownership of the island; for instance, funding or new programs oversight. Did that add to your responsibilities, could you address that briefly?

*Lyndal Laughrin:* Well, it definitely was a big impact, a big change. You went from one guy that basically ruled the island. His word was virtually law, right, wrong or otherwise, it was things were run the way he wanted them, almost.

*Dewey Livingston:* Changeable – was he consistent or –

*Lyndal Laughrin:* He was fairly consistent and basically a part of my job was to know his view on things so you could avoid dealing with problems after the fact and you could prevent them beforehand. So we got along pretty well and most of the time managed to keep things on an even keel. Then it changed to basically, a larger bureaucracy type of program with lots of people, frequent turnover of people, maybe not their overall philosophy, goal, mission changing, but kind of implementation on the ground and what they're doing day to day had more variation.

The biggest changes revolved around the idea of changing from a ranching perspective and getting rid of the animals into one of preservation, conservation and interest in biodiversity of flora and fauna, and, actually from that perspective, there's probably more compatibility and a complement of programs between the University and The Nature Conservancy.

They (TNC) were very supportive of the field station as was Dr. Stanton so there weren't really any kind of political ramifications or that kind of stuff. The people most involved right during the transition from Dr Stanton to TNC had been involved before, because there was a period of time, almost ten years, when the TNC made the deal with Stanton before he died until they took over completely, so during that period, they had programs starting here. They had people interacting, so we knew one another and they knew about what the University program was all about and so it wasn't like cold turkey the next morning, kind of thing.

And actually, The Nature Conservancy and the University Natural Reserve System have other connections. There are several other sites that TNC had actually owned and in some cases transitioned complete ownership to the University that were former Conservancy preserves and projects. So we had a broader and previous history with TNC.

*Dewey Livingston:* Was there TNC staff on the island full time before Dr. Stanton died?

*Lyndal Laughrin:* Well, they had guys that would live out here and manage their little program and then they had a project manager usually based on the mainland so at the time of his death, Bob Hansen was the director of TNC Santa Cruz Island Project and Peter Schuyler was the on-site staff, the TNC staff person that lived out here and worked out here and was the hands-on for the programs. And they had other people previous to that.

*Dewey Livingston:* Where did Peter stay; at the ranch?

*Lyndal Laughrin:* No, because that was part of the deal with Stanton. He didn't want to have the TNC programs right in his backyard, right? Full view, so to speak, in the front yard. So not long after they made their deal, they built a little set of cabins just to the west of the field station about another quarter of a mile from here. We call them the cabins and they're on a little ridge right above this big eucalyptus grove just to the west here. And so part of that was a little building for a residence for their staff person, Peter at that time, and part was a bigger communal room so they could have six or eight people at a time, with kind of communal kitchen gig.

So that's where they would have their people.

*Dewey Livingston:* I didn't realize that little complex went back that far.

*Dewey Livingston:* Yes, because TNC wanted to start having some kind of access to the island but Stanton didn't want to give them the bunkhouses at the ranch or have them as personal guests. So they kind of compromised on this area that's close enough that they could tap into the water system but they didn't have their own electricity until more recently when they put in solar, but then they had their own separate little portable propane tanks, so they're sort of self sufficient up there.

*Dewey Livingston:* Did the field station or you have any direct cooperation with the removal of the feral sheep? That was during that period before Dr. Stanton was dead. Is that correct?

*Dewey Livingston:* Correct, yes. It was kind of an evolution of starting by helping him improve his cattle operations by removing sheep out of the areas that were cattle pastures and helping keep those fences secure. There was always an ongoing battle with the sheep encroaching back into the [pastures] – even though Stanton’s father had started the process of removing sheep and turning parts of the island into cattle country.

But two factors always made those fences less of a barrier; that would be natural erosion events, such as any time you cross a gully or a stream or anything like that. Those were always vulnerable to getting washed out and sheep could start going through the holes there. The complete fence would be taken away. And then the pigs were very good at getting their nose under a piece of fence and lifting it up. Finally after enough pigs have gone through, a big enough hole developed and sheep could start using it too and so the ranch cowboys were constantly checking fence lines and mending fences but sheep would still get in and they would have to shoot them and there would be an ongoing scenario of more or less sheep, depending on the pasture and the topography and the rainfall year, those kinds of things.

So when TNC started wanting to influence the feral animal/sheep impact, the first selling point was, we’ll help you improve your cattle areas and so Peter did a lot of work re-securing fences and then would volunteer with other TNC guys to shoot the sheep that were within those areas. Then once they got them back into the more or less sheep country – the remote ridges and mountain, isolated mountaintop places that the cattle would never use anyway, then that’s when things got a little more controversial because Stanton still had the hunt club operation and was getting revenue from guys paying lots of money to get a trophy ram with a big curl. TNC wanted to start continuing the sheep removal all the way to total eradication eventually, but he wanted them to basically wait until he was done out here ‘cause he was getting money from that hunting operation.

But they basically pushed the issue until they got, not the go-ahead maybe, but at least the end of the resistance to it, and so that became a part of the major point of controversy between them.

*Dewey Livingston:* Well, did you have any part in the ranching operation?

*Lyndal Laughrin:* Oh yeah, over the years I helped the ranch. You know, we ate lots of legs of lamb; some of the best lamb I’ve ever eaten in my life was from the sheep out here, and I helped work on the hunting crews with Peter a couple times.

*Dewey Livingston:* There was no formal arrangement with the field station?

*Lyndal Laughrin:* No, no, no, that was solely [my own time]. It’s just like the way I helped with the roundup of the cattle. It was not anything to do with my job with the university other than being a good neighbor – you

know, as long as they're happy with you, it doesn't matter why, I guess. It improves the overall picture.

*Dewey Livingston:* I know TNC has programs, perhaps similar to ones that are going on at the field station. Now at the field station, you're not determining your programs or filtering the researchers and the work that comes in here. Are those fairly compatible though? How do you coordinate the work between the two entities?

*Lyndal Laughrin:* Well, most of the stuff TNC is doing is kind of focused on two things. They're fundraising, so they're looking at potential donors or current donors and bringing them to the island to see what TNC does, encourage them to support TNC, not just the Santa Cruz Island part of the TNC, but TNC in general.

And then they do have some housing that they use for people that are doing hands-on resource management stuff, although they do send more and more of the people doing that, to use our housing and the vehicles even. So particular projects that they are very interested in supporting have changed over time, obviously, first, with feral animals and now with plants. They have limited extra housing and so depending on how they're supporting the projects, people will stay (at the field station) or the cabins.

They don't use the bunkhouses at the ranch too much for management projects anymore. It's mostly just other TNC staff that use them. So when those places are full or that project's operating for whatever they're doing, and other stuff that needs to happen at the same time, a lot of those people will stay here at the field station.

*Dewey Livingston:* Well, it appears then that TNC is perhaps more on the resource management side of activities here and the field station is more on the research side perhaps and that those help each other out.

*Lyndal Laughrin:* Yes, I would say it's kind of like research that's applied and management related types of thing, those with more direct connection with TNC, not just research because people want to know something about something. It might benefit them sometimes and they don't even know it even, but they're not themselves putting resources into it, [although] they may encourage some of the stuff with a research grant.

They used to have a research grant program. I'm not sure where that is anymore. And then the education stuff, we do basically all that. Anybody that approaches TNC about bringing a class out or something like that, they say just go talk to the Reserve, to Lyndal.

*Dewey Livingston:* Okay. And then another administrative change so to speak on the island was the park service. I know that the east end didn't have that kind of relation with the field station. Isn't that correct?

*Lyndal Laughrin:* Yes, and that was an artifact basically of the logistics because there are no roads that go over there. When we started here, it was still owned by the Gherinis. Probably over that timeframe, I had maybe a half a dozen people that wanted to work there and usually what I would do to

facilitate their access to that end is, I would get Dr. Stanton to be supportive of it and then he would actually talk to the Gherinis as a neighbor and say these people have a connection working on my side and they've done good work and they're no problem.

Because a lot of times, something that's here or there is something they needed to check on over there and they needed some way to connect what they'd been doing here to include that part. And most of the time you had to get independent transportation over there, because the Navy boat didn't stop there and there's no road over to there from our side. There's only a certain distance you can drive out close to there and then you actually have to hike up over the mountaintop and there's no roads on their side and no vehicles.

So usually it was fairly independent. And the same thing when the park acquired that end, they still acquired only the Gherini part, which basically was the other side of that high ridge there, so it wasn't until 2000 when TNC gifted the isthmus section, 8,000 acres, to the park that a part of the island that traditionally we'd been using more was included in the park and so then we had to take that into consideration when people want to be over there. So it's pretty straightforward. It's fairly reasonable.

There's some differences in the bureaucracy for the permitting process, but for instance, if people are just doing observational projects, you can just go over there and hike around and watch and count things. If you actually want to do something and take samples or something like that, they have a permit system and you go through that process. It's pretty straightforward.

*Dewey Livingston:* Is that 8,000 acres on the isthmus still considered part of the Santa Cruz Island Reserve or is that removed?

*Lyndal Laughrin:* No, the Reserve part is considered whatever the TNC acreage is so 8,000 acres were lost in the numbers game, so to speak.

*Dewey Livingston:* Is there something like a cooperative agreement here or is it just informal and you get a permit?

*Lyndal Laughrin:* We have a formal Cooperative Agreement; most of it's related to kind of mutual aid, using the pier, encouraging each other and supporting working together. It also allows the park or researchers to formally [do work together] because there is certain moneys and funds that you can apply to and if you have this formal thing in place; it's easier to be in the process or have access to grants or proposals to submit.

And as I also mentioned, it's not a precedent. There are other Reserves that work within the context of the park system properties. We have a Reserve in the Santa Monica Mountains called the Stunt Ranch Reserve and they're embedded and work a lot with Santa Monica Mountains National Recreation Area. There's the Sweeney Granite Mountains Reserve that works with Mojave National Preserve.

*Dewey Livingston:* Back to the Gherinis, I assume Dr. Stanton would deal with Pier and Francis Gherini. Were they pretty cooperative as far as the scientific study? I heard their father wasn't.

*Lyndal Laughrin:* They seemed to be. The frequency was pretty low with the people that I remember trying to facilitate this for but there didn't seem to be any problems. You know, in the bigger picture of how more supportive they were, I don't know whether people from outside were contacting them and turned down or out there all the time.

*Dewey Livingston:* But you didn't talk to them.

*Lyndal Laughrin:* I didn't usually talk to them or deal with them directly at all because Stanton's attitude was, we're here as his guest program and so he's the landowner. He's the neighbor. He had a much more formal social mindset than our generation, in terms of how you interact with other people. You wear a coat and tie when you have dinner. You take your hat off in front of women and that kind of stuff, not like the kids today that wear baseball caps to the dinner table.

*Dewey Livingston:* Yeah, and shoot him an e-mail.

*Lyndal Laughrin:* Yeah right, and they're texting at the same time.

*Dewey Livingston:* That's been your 15 minutes probably, do you think this is a good time to quit?

*Lyndal Laughrin:* We probably should quit. I should go figure out what these guys want to do –

*Dewey Livingston:* So this is the end of this morning's session here.

End of audio file 3; total time 1:20:08

Audio file 4, Sunday afternoon, May 8, 2011:

*Dewey Livingston:* It is still May 8th, 2011 and this is the fourth digital file of talking to Lyndal Laughrin and we'll continue. We've been talking about the field station and now moving on to talking about Dr. Carey Stanton and the Stanton Ranch.

I understand you've had about 20 years of being acquainted and then knowing him. So I wondered if you could recall your first meeting with him, your first impression of Carey Stanton, and then how you might paint a picture of him as you got to know him.

*Lyndal Laughrin:* My first lasting impression that I have, I can't really honestly say it's absolutely the first impression. I don't recall meeting him formally before this but I think I mentioned we were out here and I think it was '65, June or July, and I was with this professor, Dick Holmes. I had been teaching while my major professor was on sabbatical and we'd been out just looking around and so at the end of that visit we were going to head back down the canyon to catch the Navy boat at that time. It's what you rode back and forth regularly. I can't remember exactly why we were in this situation but it ended up we were getting a ride with Henry Duffield in his pickup truck and he was the ranch foreman at that time running the operation for the Stanton family.

And so we're cruising down the canyon to the harbor and come around the corner in that last big grove of eucalyptus trees and here's Dr. Stanton in the jeep off the side of the road in the bushes holding the steering wheel up over his head. So we stopped. Turned out what happened is that for some reason the steering wheel had come loose in his hands. He couldn't steer the car at that point obviously and it went off the road and we happened to come upon him just after it had happened. Nobody was hurt but it was just kind of a strange encounter to be the owner of the island and here he is up in the bushes holding this steering wheel over his head. I don't really remember whether we had a formal introduction or he hopped in the truck probably and more or less ignored us and got down to the boat and they were probably picking up their groceries or whatever.

And we get down to the boat to leave and it was probably not until the next visit or a couple visits afterwards when I was coming out here and interacting with Michael Benedict that I probably got really introduced to him. Michael became fairly good friends with him and for various reasons we'd get invited down to the ranch for dinner, cocktails, drinks, whatever, and that was probably one of the times when I first met him formally.

*Dewey Livingston:* What was he like? How could you describe him? Are you willing to do that?

*Lyndal Laughrin:* He was certainly one of the most interesting people I've ever met and certainly had the, I would say privilege and pleasure to spend so much time with. He was the kind of guy you could either love him or hate him depending on the right side or wrong side of him that you were

on. I somehow think I managed to pretty much stay on the right side it seems like, most of the time. He was extremely well educated, extremely intelligent, articulate, probably one of the more articulate people I've ever encountered, a real stickler for proper vocabulary, proper grammar. Well read, extremely interested in the island, all the research that went on here. He'd been supportive of having people come here even when he had to personally have them as guests at the ranch and deal with them on a more day to day basis than certainly the way it evolved with the field station here taking up much of that kind of responsibility.

And that facilitated a lot of stuff that I think he appreciated as it went on and liked knowing about the island from that perspective. His family was fairly wealthy. I don't really know his parents' backgrounds going back in time, their circumstances. His father had an oil company that was involved in Signal Hill and so they certainly got money from that, enough to be able to purchase the island in 1937 for what today we would almost consider pocket change but in those days probably was a lot of money. I never met his father. His father died in 1963, before I ever first came to the island so everything I have to say about him is all secondhand, you know hearsay passed on from other folks.

I did meet his mother but unfortunately by the time I was out here frequently enough for interacting with Carey Stanton and be able to meet his mother, she'd already had a stroke and wasn't in best of shape. So I could not really say much directly about my personal knowledge of her, it's mostly based on stories either from Dr. Stanton himself or a lot from Henry Duffield, the ranch foreman, who knew them well.

*Dewey Livingston:* Did he like to tell stories?

*Lyndal Laughrin:* Stanton? No, not particularly. He wasn't asocial but he certainly had his own restricted set of friends that he liked to interact with. He wasn't the kind of guy that liked to sit down and become your best buddy over a cup of coffee or a beer by any means. So it took a while to cultivate a relationship and get any kind of a close ability to have a discourse that was more meaningful. He had a brother, and so the stories I'd heard involved his brother being the one probably being groomed to take over the island.

So Carey Stanton went off to college, continued his education and went into med school and became a doctor and specialized in pathology and actually had some short time to practice. His brother never got to run the island because he was in the army and killed in the Second World War at the beach in Normandy and so that took that card off the table. And when his father got old enough that he no longer could actively run the ranch, or felt he couldn't, he gave his living son, Carey Stanton, the ultimatum decision that if we're going to keep the island in the family you need to come and start managing, which would mean realistically giving up your medical practice, because pathology would be a difficult thing to continue to do from a remote [island] – not the kind of practice you can keep your hand in

and work out of your house so to speak. So those were the choices, continue being doctor or get rid of the ranch, island, or keep the ranch – so he decided he would rather keep the ranch in the family and that more or less ended his active medical practice.

I think it was a decision that probably weighed heavily with him and I think over the years certainly, probably I wouldn't say regretted, but he certainly kept up his interest (in medicine). He kept his license current all the time. Any time the cowboys or, heaven forbid, you told him you were going to go traveling in a foreign country, immediately [he would] figure out all the vaccinations you needed and ask you to line up and expose whatever part needed exposed to get the appropriate shot. He certainly kept part of his medical abilities in hand by doing all the cattle doctoring, basically the castrations, all the vaccinations. He personally did most of that.

And even to the point in later years when California changed their rules and said that you had to have ongoing education to keep your license current he actually would go to the mainland and take classes in order to do that. So I think it was something he valued in spite of having to give it up. But he did, and essentially came out here and considered the island his home from then on, but he was certainly, if you ever met him or spent time with him you would not mistake him for your typical cattle rancher.

He wasn't a cowboy type of person at all. He didn't have a lot of mechanical aptitude; he loved his books and reading and all that kind of stuff. He'd go out in the jeep and ride around with Henry but he wouldn't really do the day to day ranching, running the island, that kind of thing with the cattle. He had Henry Duffield as his ranch foreman and the vaquero cowboys to do the work.

*Dewey Livingston:* Even though perhaps he wasn't your typical rancher, did he exhibit an enthusiasm for the ranch and the ranching operation?

*Lyndal Laughrin:* He loved the island's history, the historical connection of the ranching and the past, so from that perspective he really wanted the ranching to continue to exist. Not knowing exactly the details, but he had personal wealth besides the island so he wasn't really relying on the island's income as a personal income so his feelings were that if the island could pay its own way, that's good, the taxes, the payroll, what it takes to run the cattle operation but he didn't need to be making money hand over fist to support an extravagant lifestyle besides that. But he took a great love of and put a lot of care into the buildings; anytime something needed to be done, he did not want just some nail pounder to work on stuff, he wanted craftsman type of skilled labor and people to do the repairs in the old buildings. Any time he added anything new he wanted it to fit in.

We saw him looking for stuff that had been on the island that somehow it had migrated to the mainland for various reasons, he tracked it down, convincing people that it should come back to the island. One example would be the little telescope that used to be up in the little lookout house down at Prisoners' Harbor. [He] talked to

people that had it on the mainland and returned it to the island – it's not in the lookout, it's up at the main ranch.

*Dewey Livingston:* How much time did you spend with him? How did your relationship out here at the field station – you've talked about his interest in the place but did you see him quite often?

*Lyndal Laughrin:* Yes, quite often, various reasons for that. There's a lot of interconnectivity between, particularly, our utility systems so keeping things running or interacting with him about that; just knowing what they're doing with their cattle operation on a day to day basis, where people are going to go from the field station, classes or researchers, communicating that back and forth, so in case they were doing some cattle movement that didn't need kids running around the hills that might spook the cows on that particular day, they needed to know how to avoid that. He was interested in knowing where people were at most times on the island so from that perspective, at least every couple days, you knew that far ahead to let the ranch people know what you're doing. And then over the years I just became good friends, both of Henry and Dr. Stanton, being the neighbor and there being limited other social interactions; mostly they'd ask me, or me and my wife, to come down there for dinner. Once in a while they would come up here but it was certainly much easier to go the other direction.

*Dewey Livingston:* Was it informal enough that you could go down there whenever you wanted and knock on the door for anything or did he have hours?

*Lyndal Laughrin:* Pretty much, it certainly got to be informal. I mean there would be times when they would have guests down there and you did not intrude. You knew that you just went down first thing in the morning in a business sense and not just showing up impromptu, but it was never to the point where you had to be worried about whether you showed up if you had a real reason to be there. But I think part of that was just cultivating the relationship. I mean you could certainly get yourself into that position with him because he could have that kind of a personality where you could be intimidated and on tender hooks and not wanting to get on the wrong side and bring down his wrath on you.

*Dewey Livingston:* Did that happen?

*Lyndal Laughrin:* Oh, I've seen it happen. Saw it happen a lot but personally I was fortunate that it really didn't happen to me.

*Dewey Livingston:* What kind of person did he have little patience for?

*Lyndal Laughrin:* I would say people with big egos and full of themselves and assuming and assertive about themselves, I mean he was the owner of the island and if people didn't realize that and acknowledge that in how they behaved with him, that could get you in a lot of trouble quickly. He also, unfortunately, he sort of [had] you might call it a class attitude and reclusive nature, the difference in how you approached and dealt with the help versus people of his own social status and peers. I would say an example would be the contrast with Henry Duffield, the ranch superintendent. It was just that (with Henry) everybody was his

buddy, a Will Rogers kind of guy, he could just walk into a bar and could sit down and be your best friend and drink with you all night long. Dr. Stanton never considered doing that or ended up doing that probably.

*Dewey Livingston:* But you mentioned not being the typical rancher type et cetera, but I've been up some of these roads, they're pretty terrifying if you're not used to that. Was he pretty comfortable with that?

*Lyndal Laughrin:* Yes, he drove around all over the island. He'd had a lot of experience and he was 13 years old when he first came here and grew up learning to drive and riding horses out here and –

*Dewey Livingston:* Do you have an impression since you got to know him better and better, how he generally spent his time? You said he liked to read a lot but was he on the island most of the time?

*Lyndal Laughrin:* It probably varied over the years. I mean he did travel a bit. He had business on the mainland so he would spend time there. For a period of time he was on the board of directors for the Museum of Natural History in Santa Barbara so he would go to meetings and visit friends in Santa Barbara and Pasadena. In his later years he actually acquired property in the Outer Hebrides off Scotland and he would go there a couple times a year and spend probably 3 to 4 weeks at a time there. A certain part of the day he would be just doing island related business stuff. He did most of the bookwork, the accounting, that kinda stuff out here.

*Dewey Livingston:* Make deals, deal with cattle sales, purchases?

*Lyndal Laughrin:* Yes, I mean that wasn't a frequent thing because they did basically cow and calf breeding here so usually it's only once or twice a year when they're moving cattle on and off the island. Very different from Santa Rosa, where they bring young animals over and put them on the grass for a while and be more frequently moving them back and forth depending on grass, animal condition, market. Once in a while, not every day certainly, he'd get out and either travel around the island with Henry to see how things were going. It kinda varied by the time of the year because of what you're doing with the cows so whether you're checking on the cows when they're birthing and having babies, then you're out there more frequently. During the roundup periods he would be actively either at Del Norte or Christy where they're gathering them and doing the branding, castrating.

*Dewey Livingston:* Would he stay out at Christy in any regularity?

*Lyndal Laughrin:* No, most of the time that was just the bunkhouse for the cowboys during the time I've been out here. So he'd come back to the main ranch every night.

*Dewey Livingston:* Henry Duffield, tell me a little more about him.

*Lyndal Laughrin:* Another very interesting person, to say the least. He came from a fairly wealthy family in the Detroit area, Bloomfield Hills. His father

was in stocks and, I guess, banking. And let's see, I think he had a sister and maybe a brother I'm not sure about. But they used to spend their summers down in Colorado and so as Henry got older he just really liked that part of the world and particularly the ranching. I guess he started working in the summers while the family was there – on some of the ranchs.

And so he just decided he's not going to go into the business with his father. That was pretty boring. He wanted to go into ranching and I don't know the age but he was fairly young. He ended up owning a cattle ranch in, I think it was southwestern, or maybe south central Colorado. And I think about that same time he married a woman who was an opera singer and they ended up parting after, I don't know how many years, but she didn't really like living in a remote ranch when she wasn't traveling and he didn't like – did it for a bit, but he didn't like traveling and ending up in big cities that much so they sort of mutually split up. Then he left there and he was actually in Cuba with one or two partners maybe, again ranching. This was pre-Castro.

Saw Castro starting to come into power and that whole scenario and decided that wasn't going to be a good place to stay so they left there and went to southern Mexico to Chiapas, very southern part of Mexico. And he had fairly wealthy friends in Mexico and through their connections he was up in Mexico City apparently, I think he was playing polo when he came down with polio and ended up in an iron lung and as a result of that, basically was paralyzed from the waist down. And the story that I'd heard about his connection with Stanton is, Stanton and a bunch of his medical buddies were down in either Acapulco or Puerto Vallarta, one of those big resort cities and they happened to see this guy standing up by the bar with all these braces and crutches and being doctors they decided that they would invite this interesting looking medical specimen over to talk to them and see what was up with how he got in that position.

And apparently during the discussions it came up that Henry had been in the ranching business and this is what had happened to him and Stanton's family had this big cattle ranch on Santa Cruz Island and basically (Stanton) invited Henry to come and visit sometime. Henry had decided at that point that he was no longer actively ranching 'cause he was basically crippled, handicapped. But he decided to take him up on it and came up here and apparently he and Mr. Stanton, Carey Stanton's father, hit it off immediately. It was like two peas in a pod. So Henry's cruising around the island with Mr. Stanton and just talking away about whatever.

And finally, it's getting time for Henry to leave and Mr. Stanton says, "You really seem to know a lot about this." And apparently at that time the current superintendent or foreman wasn't working out to their satisfaction and they wanted to replace him and (Mr. Stanton) said you know, "I don't need you to be able to ride the range and build fence or rope cows or anything, I just need your brains to run this place. I got plenty of vaqueros, Mexican boys that can go out and do the work. I'll set you up with a jeep with controls on it you can drive it yourself.

Have a guy to ride around with you all day to open gates or whatever. Why don't you come out here and work for us running this place?"

Apparently Henry had no other pressing things that looked as good as that certainly and decided give it a try and so that was apparently in 1960. Did that for a couple years while Mr. Stanton was still alive and ended up staying here until he died in 1986. Henry died in November of 1986.

And so he basically ran the ranch. He's the one that had the expertise on the cows, when to move them in the pastures, how the condition is, you know, picking out which ones are not breeding well anymore and selling them, which calves to keep for breeding and either bull calves or heifers, building the herd quality.

*Dewey Livingston:* Did he tell you that story then, about how he came here?

*Lyndal Laughrin:* I think that was a combination between both of them. That was a while back so I can't – not thinking I would ever really get to this point. It's like a lot of other things out here over time. You look back and wish you'd jotted down notes on a piece of paper or taken a picture of that at that time or whatever.

*Dewey Livingston:* Similar as I asked you about your first impressions of Carey Stanton, do you recall meeting Henry?

*Lyndal Laughrin:* Well as I recall, he was the one that gave us that ride down the canyon and that was just the way Henry was. He loved to come up to the field station, hang out, just talk to somebody. He offered to give you a ride to wherever; he just liked the company, liked the social interaction, liked inviting you for a drink. A lot of times when Stanton wouldn't be on the island, Henry would just invite anybody and everybody down, have drinks or have dinner. It was much less formal and more casual.

Might still have to wear a coat and tie if you knew ahead of time you were getting into the situation, but it wasn't quite the hardcore scene as when Dr. Stanton was here. That happened less frequently, you'd best be glad to be invited by Dr. Stanton. When Dr. Stanton was on the island, Henry couldn't just invite people to just show up; Stanton wouldn't like that. But the whole scene down there was very formal in terms of, cocktail hour was promptly at 6:30 and you sat in the summertime on the little porch in the front and looked out at the northern mountain range, or in the wintertime you were upstairs or in the big formal living room there, and then dinner was served right at 7:30 in the formal dining room, all laid out with sterling silver settings and the cook, she was the same one person, would serve. Different courses came at different times with a little bell that Dr. Stanton would ring in between when you're ready for the next one. You were expected to wear coat and tie.

*Dewey Livingston:* How was the food?

*Lyndal Laughrin:* It was adequate. Neither one of them were what you call nowadays foodies – and a lot of it was related to the fact they always had a Mexican woman that was the housekeeper/cook and so keeping the meals fairly simple and repetitive, helped to have them keep better quality so to speak. So she'd cook Mexican food for the cowboys and a lot of times Henry certainly, and a lot of times, Dr. Stanton would eat lunch with the cowboys in the mess hall but dinner was always more [formal] – oh, there was Cornish game hen, there was a big slice of ham, there was Salisbury steak – there's just those 3 or 4 items. And so you'd rotate through those.

*Dewey Livingston:* Island beef, did they ever slaughter?

*Lyndal Laughrin:* Well they would usually slaughter beef for the cowboys, and the sheep and not so much the pigs. But most of the stuff that Dr. Stanton and Henry ate just came from the mainland and was just easier.

*Dewey Livingston:* Who managed that? Do you know who managed the shopping?

*Lyndal Laughrin:* Well it was all the time [done] remotely. Henry or Dr. Stanton would just call in the order. They had a small grocery store (Anacapa Market) near Port Hueneme and just call in what they needed and those guys would deliver it to the Navy boat and ship it out here. Nobody really went shopping, so it was pretty limited on fresh vegetables. When I first came out here they had a lot more cowboys, and those first little corral/enclosed sections as you walk down that lane between the ranch and over to the chapel, one whole side there was a very large vegetable garden, and there was a guy that cooked at that time (who was also the gardner). But during the time when I was being invited down there and knew about things it was downsized and there was nobody doing the gardening thing so it was all frozen vegetables and pre-packaged stuff pretty much.

*Dewey Livingston:* Why was it downsized – do you understand what was going on there?

*Lyndal Laughrin:* They just didn't need that many guys. They could get by with fewer.

*Dewey Livingston:* Where did Henry live? Could you explain who lived where out there?

*Lyndal Laughrin:* Well, there's the big old two-story, what they call the Justinian House, and the upper part of that has two bedrooms. Dr. Stanton had one bedroom, Henry had the other; two bathrooms and then a common little living room, sitting room. And then downstairs from that would be the kitchen and the formal dining room. Adjacent to that was what they called the Phoenix House, and that was a very large living room, more formal living room and two bedrooms. That was the building that was built after another building burned in 1950 that set just to the east, maybe between where that building is and the swimming pool is now.

And so when that burned, that building had been used for the Stantons when they would visit the island. They usually would come in the summer for short periods of time and then weekends or whatever over the year. So the new building was previously Mr. and Mrs. Stanton's

bedrooms. Each had their own bath and then kind of a big (living room) – so whenever guests for Dr. Stanton came out they would use those; they'd use those bedrooms, and then there was like what they called the motel wing which is a little series of three rooms along the walkway out to the pool.

So Stanton's personal friends would all use those different rooms in different configurations and then they would use the big formal living room for the social hour before dinner and after dinner, hanging out, drinking, whatever, and then the formal dining room for dining. And then the first western-most end of that kind of motel wing complex had what was the office. Henry and Dr. Stanton both had their desks in there, kind of the nerve center so to speak of the island's operations for the ranching business. And then over behind that to the south would be the big common dining room for the cowboys and kitchen for them; big walk-in cold room, a little room back in the end that was usually the maid's quarters. And then out in the yard, separate buildings would be the two bunkhouses. [It was a] series of small rooms usually with a communal bathroom, where the vaqueros would have their rooms. And then there was the tack room for the saddles and all that kind of stuff; the big horse barn which, in my timeframe here, was never used as horse barn, it's more just storage; and then the mechanic's shop where we worked on cars and repaired all the vehicles.

*Dewey Livingston:* So you mentioned the guest rooms and the guests. This is after the parents were gone basically. Did he frequently entertain? Was that a rare thing or were there particular events?

*Lyndal Laughrin:* It was probably in between. It wasn't frequent but it wasn't rare. As I mentioned he had this core group of friends that were basically all classmates at Stanford during the same timeframe, and those folks would be the ones who would come out most often. Occasionally he'd have other people; he'd have the Chancellor from the University and his wife out, he had had the President of the University over the years, several different ones; those kinds of folks would come rarely, maybe once depending how much he liked them and wanted to put up with them. May be come out several times but not like his core Stanford people who were regulars, who would come out once or twice a year. The same people would be the ones he would spend time with when he went to the mainland.

*Dewey Livingston:* Would some of his guests be allowed to ride around the island on horseback?

*Lyndal Laughrin:* Hardly anybody rode the horses (except the cowboys). They'd go around in the jeeps in the timeframe that I've been here. A common thing would be: Coches was a popular lunch spot, fill up their two quart Stanley thermoses with cold martinis and they'd all go trucking over to Coches for lunch or out to Christy for lunch. And then, not so much that Dr. Stanton would go with them, but Henry would go with them, as some of the men in that vintage were all hunters and so they'd load up a jeep full of guys and go off chasing pigs and sheep.

Dr. Stanton was not a hunter, I don't recall that he ever really went hunting so to speak. He might have shot a few sheep because they were in the pasture, or he would certainly shoot a cow that was in extreme condition or a horse that crashed and broken something. But he wasn't going big game hunting, whereas people that I had seen over the years that were out here, like Otis Chandler and Bob Peterson, people like that that, they'd all end up running around with Henry doing that kind of thing.

*Dewey Livingston:* Probably having a good time.

*Lyndal Laughrin:* Oh yeah. I think no matter who or what you did out here you pretty much couldn't avoid having a good time I don't think.

*Dewey Livingston:* Were there any general public visitors allowed – what was that situation?

*Lyndal Laughrin:* He was fairly restrictive to the general public so no, there was not much casual visitation where you just came up to the ranch. In those days there really wasn't the public access with a boat system like we have now. This was before Island Packers brought people out here. He was at the same time fairly generous with public access from the perspective if you had access to a yacht or owned a yacht, you could actually get a permit from the Santa Cruz Island Company, essentially Dr. Stanton, to come ashore and hike around. And the main restrictions were where you could go with about the only restriction being up the Prisoners' Harbor Canyon into the main ranch. And other than that it was more or less how able-bodied (you were) and how much effort you wanted to put into it.

So if you came ashore at one of these southside anchorages or up the coast, if you wanted to hike up over that mountain range and end up in the central valley, that would be up to you. The conditions were that: you had to sleep on your boat, so you had to be able to hike around and get back to the boat, spend the night. You wouldn't have a campfire on the beach, you wouldn't bring your dog ashore, you wouldn't dig in the Indian mounds, you wouldn't molest the plants and animals. So you could get a permit either for a year or for a 30 consecutive-day period. So if you were a local and lived here (southern California) and had your boat here and came out frequently, you would get an annual permit and if you were just like going from San Francisco to Mexico and wanted to stop in for a couple days while you're traveling, you could get the short term permit. You know, it was basically permission to trespass, as long as you agreed to those conditions and abided by them.

He would make an effort (to check permits) – particularly at the more popular beaches during the popular times like holiday weekends and the ones that were easier, where he could drive right up and see what's going on – to check people if they were ashore, ask 'em if they had their landing permits with them. He also cultivated the yacht clubs – so that they would self-police and be aware of this whole thing – by going to most of the local yacht clubs, at least from Santa Barbara to L.A., to meetings and give a little talk about the island and include the

awareness that you could get this permit and if you're going to sail out there, please respect my ownership and abide by these conditions that I ask of you.

So from that perspective he was pretty generous about some kind of access. I mean, if you had a little boat and just popped ashore, sure, there were a lot of anchorages particularly along the north shore where you could probably hang out for days and nobody would know you're there. Most of the time, unless you were doing something that was obviously against the permit, in violation of it and you didn't have a permit, he wouldn't try to get you off the island immediately. Like "okay, well next time you come back, be sure you have the permit." I can't recall too many times where he would actually try to call the sheriff and push it any further.

*Dewey Livingston:* I've heard the story of him finding garbage that was left – is that story one you could vouch for?

*Lyndal Laughrin:* Not that I was there personally but I certainly have heard the story often enough and probably fairly soon after it happened to know that it probably was based in fact to a high degree. Do you want me to give my version of it or?

*Dewey Livingston:* Sure.

*Lyndal Laughrin:* Well, basically he came upon a pile of trash on the beach, I don't really recall which beach it was. But somehow in the trash was something that led him to believe who left it there and it turned out to be an antique dealer in Santa Barbara. And so the story is that he took the trash and I'm assuming it must have been the same trash, I don't know, could have been just a bag of trash for that matter but went to either their business or their house and just walked up and threw it down in the front yard or on the front doorstep or something and somebody came out to confront him like, "What the hell are you doing here throwing your trash down in our yard?"

"Oh, no, I'm just returning the trash that you threw in my yard. The next time you come out (to the island) be sure and pick it up and take it home with you." And then from that, they kind of introduced themselves or whatever and actually became friends. And I know that he interacted with this guy and bought stuff from him in later years.

*Dewey Livingston:* Would Dr. Stanton in that moment had been in a suit and tie?

*Lyndal Laughrin:* If he was on the mainland it was most likely. Because even at the island he ate dinner here in suit and tie. He dressed in a suit and tie to get onto the airplane. He mostly traveled on the airplane but even riding in on the Navy boat he would put those clothes on to leave the island and he'd be wearing those things when he came back to the island and any time I saw him on the mainland in whatever context, he was always in a sport coat, maybe not a complete suit but it was certainly a coat and tie. Yes, he was of that generation that that was the proper gentleman's attire almost all the time when you're out and about. I mean even to the point where one time he couldn't fly due to

weather, he had to ride the Navy boat but it was raining and muddy and Ann and I were coming back on the boat. And the only way we could really get anywhere, is you could get a ride up on the Navy road and get off at what we call the Red Cross box up on top of the hill where the road connects down to the airport, fairly steep and you could walk down that hill and at the airport you could get a car, drive back through the valley 'cause that one road was too steep and too muddy. You couldn't drive up and down it.

And so somehow we'd talked on the phone (with Dr. Stanton) and we knew he was leaving and we were going to drive up and leave our car there. He was going to leave his car on the bottom. We would cross in between and then use each other's cars to make the rest of our connections. We'd get back to here and he'd go on down to the boat and hop on. And so we're trudging down the hill in the mud in the rain and here comes Dr. Stanton. He's got a suit on and in those days he wore Earth Shoes a lot and he's got one of those 29-cent clear plastic raincoats on, little thing, soaking wet, trudging up the hill and one of the Mexican boys behind him is carrying his suitcase and his little briefcase for him up to the top of the hill. We said hello, goodbye, passed on the way. Suit and tie – that's the way he went no matter where.

*Dewey Livingston:* Did you have any experience in Henry or Dr. Stanton's dealings with poachers, or harassment of animals?

*Lyndal Laughrin:* I'm sure they did. I was never with them personally during any of those things but I certainly had a couple of stories. One time I drove up to this beach on the backside, Coches, and as I approached I could see there was this fishing boat. You can see the beach from a long ways off as you're coming down and you can see what's in the cove there and you can actually see the beach, so I could see the boat out there and I could see a bunch of people mulling around on the beach there. So I get down there and there's all these people and they've got tents set up and they're going to have a campfire and there's a dog running around.

So I'm sitting there watching them for a few moments. I've got another guy with me, a friend, and pretty soon this guy breaks off and walks over to us and I look at him like, you obviously know you're not doing something right here. I say, "Well, you guys know you shouldn't be camping here and it's obvious that you're looking like you're getting ready to." And so he starts telling me, "Yeah, I know. These are my friends, my relatives from over in the valley and he's a local fisherman out of Hueneme or somewhere. You know, I like to bring 'em out here and I'm not going to stay here. I'm going to stay on my boat. You know they do me favors and this is kind of a return favor."

I say, "Well, you really can't do this and you got the dog here and you're obviously having a campfire and you need to pack everybody up and go back in the boat. Otherwise I'm going to go back and tell the people at the ranch." He starts telling me, "Oh, yeah I know. I was afraid you were going to be Dr. Stanton when I saw that jeep show up,

I had run-ins with him before and his foreman and first thing they do, they pull up with all these mad dogs and they got a rifle and they're like cocking the rifle. Not like the old days when his father was here and I could trade him some lobsters and he'd let me shoot a lamb or two."

I said, "Well, you're right. Dr. Stanton's not like his father and if he were to come down here and find you here, you'd probably be talking to sheriff right away about trespassing. So if you know what's good for you, you better gather everybody up and hop back in the boat." So yeah, I'm sure that over the years that they would come upon people on the beach doing that kind of thing or, there have been stories of airplanes landing and drugs and people jumping out to shoot sheep.

I had one interaction with a guy taking abalone, whether they were illegally taking them or not without a license I don't know, but they probably had more than they should have 'cause they had a huge gunny sack over their back out at the west end. And the guy basically threatened to punch it out with me if I didn't just leave 'em alone. And you know at that point you're out there by yourself and you're not about to get into anything confrontational. By the time you get from there all the way back here where you have some kind of communication to the mainland and you call Fish and Game and even if you have the boat identification and they try to find them and check 'em out, by then they've eaten them or dumped them and there's really no hard evidence.

Pretty difficult in those days when the resources were much [slimmer] – nowadays with the park service and rangers with fast boats, you might get a quicker response time and you could probably intercept some of those things more frequently, or at least often enough to get the word out that you might get caught. In the old days it was pretty much take your chances 'cause you're most likely not going to get caught. Nobody will ever even know. And if you do, then not a whole lot they're going to probably be able to do ultimately.

*Dewey Livingston:* Could you tell me what you know about the organized hunting club here?

*Lyndal Laughrin:* Okay, well the hunting concessions were in place by the time I first came to the island, I don't remember the actual year they started but certainly by the time I was out here frequently enough to pay attention or worry about them. So they had two different operations. Based out at Christy Ranch, they had the rifle hunting. That was smaller numbers of people at any one period of time – usually they operated from about roughly November till April, essentially the non-fire season so there's less risk to have problems in that perspective. In that program you would have a guide that worked for the hunting club and 2 to 3 hunters per jeep and so maybe 3 jeeps operating with something like 9 to 12 guys – paying customers – at a time. I think they rotated three times a week, there would be a change and new guys would come out. Guys would leave with all their trophies and meat.

And then at the same time they had another concession – the same guys ran the concession – but it was for archery, for bow and arrow hunters. They would be based at a camp that they set up down at Prisoners' Harbor. That was a big common tent dining hall area and then the guys put up their tents and they had a little bunk room tent thing that they built and that would usually have maybe 20 or 30 guys there. The rifle hunters would fly in and out at the Christy airstrip. The bow and arrow guys usually would come on a Friday to Sunday. They would come on one of the earliest versions of the Island Packers boats.

When I first started here they were coming in, boat's name was the *Paisano*, and that was the last boat you wanted to get on to ride across the channel 'cause it was slow and lots of rock and roll. If you had a bad water day you'd spend the first hunting day trying to hold on to the rocks once you got ashore, not worried too much about where the sheep were.

*Dewey Livingston:* This was mostly sheep hunting or this was pig –

*Lyndal Laughrin:* No, it would be pig and sheep. The breed of sheep that the earlier ranchers had cultivated for high quality wool, the French Merino, the males will have a big curl in the horns, the rams. And as they get older that curl increases and curls around more. So the goal is to get the biggest, gnarliest curled ram you could get for a trophy. And then the same thing with the pigs, the older they are the bigger and more ferocious they look and the longer the tusks might be. So pigs and sheep would be their targets, and they're mostly for trophy hunting. They would take a fair amount of the meat. I've eaten a lot of the older animals that one would think would be very lanolin flavored mutton and it was still pretty good quality. Probably depends how you would cook it.

*Dewey Livingston:* And those operations continued up until Dr. Stanton's death?

*Lyndal Laughrin:* I think actually the pig hunting continued even afterwards a little bit until the Conservancy basically shut the whole thing down. Have to refresh my memory for the actual date but the sheep hunting ended when the Conservancy got rid of the rest of the sheep. So that was – depending on where you are in the island – in the middle 1980s: '84, '85, '86; by '86 pretty much the sheep had been totally gone on the Stanton side of the island and they were still left only on the Park side. But about that time that was still the Gherini side. And so there'd be a few that would infiltrate through that fence 'cause that wasn't a very well maintained fence, but they would very seldom come too far, you wouldn't even see them as far as the Navy base, usually they're just out on those hillsides right where the property lines came together. But the pigs were still all over the island so there was still some pig hunting. But I think, partly liability issues, I don't know whether the market so to speak declined because obviously it was easy to get the sheep and harder to get the pigs and so maybe there were fewer hunters that were willing to pay the money to come out and put that much effort into finding something.

They also tried to transition (into recreational visits) when the sheep declined and that part of the hunting disappeared. There'd been a lot of interest in this among the hunting people, because the hunters came out in the winter and it was mostly an all male gig. But a lot of 'em loved coming to the island and sometimes it got that they came out so often they could care less whether they even hunted. They just wanted to come to the island. But they wanted to have an opportunity to have their families and wives and so they'd talked Stanton into allowing the hunt club operators to start more like – it wouldn't be sort of a bed and breakfast – more a summer camp where they could bring their families and so there was sort of this budding thing that once the sheep were gone transitioned into more of a natural history excursion opportunity to replace the revenue from the actual hunting part.

*Dewey Livingston:* At Christy?

*Lyndal Laughrin:* At Christy primarily but they did do some of that at Prisoners' also. They'd have a bigger group kind of thing at Prisoners' Harbor. And for a little short period of time the Museum of Natural History – Dennis Power was the director then, I think that was before Channel Islands Aviation took it over – they tried to run Christy just as the natural history part and not any hunting at all. But like everything else out here the logistics were always so challenging and balancing the logistics and the economics to make something supportable and viable doesn't always happen.

*Dewey Livingston:* Now were you allowed to hunt or the cowboys? Did Henry hunt?

*Lyndal Laughrin:* Yeah, besides the sport hunting that was designed to make money, and those guys were putting a lot of effort in trying to just find particular animals. Earlier we talked a little bit about how the fence system never really kept the sheep out of the cattle country, so Henry would have the cowboys just go out and patrol and shoot sheep that had gotten into the cow areas. And so we would go with him, and my son grew up out here learning how to hunt. He'd ride around with Henry when he was probably ten years old and he and his buddies would spend the day running around with Henry shooting things and raising mischief.

Sometimes over in the remote areas, when you'd have drought years and there would just be way too many sheep anyway, Henry would just send guys out to shoot sheep, just cull 'em so to speak, reduce the numbers. Mostly we were shooting females and he usually didn't want you to shoot the old good trophy rams because you knew somebody would be paying money to find those no matter where they were. And then at the same time just for the dining hall at the ranch, they'd send the cowboys out and it was just more efficient to have them go out and shoot 30 sheep and do the butchering all in one big process; pile 'em up and spend a couple days just cutting 'em up and hanging them and cooling 'em and eventually wrapping them and putting 'em in the freezer. They had a whole setup for professional [butchering], with a meat saw, a large butcher block to work on, large sausage grinder. So I'd help them and then as a consequence I'd get a few packages of lamb chops and legs of lamb or whatever I wanted.

*Dewey Livingston:* You implied that this was resource management in a sense. Maybe this was before they were thinking of that term that they needed to control –

*Lyndal Laughrin:* Right, when Stanton's father took over the island there'd already been the most extensive damage ever done, probably in the late 1800s. There were some long periods of drought and from the old record books there were some extreme numbers of sheep out here, 30-40,000 or more even. So you couple those kind of things together and you end up with bare ground over a lot of the island. When he first purchased the island, Stanton's father basically made a feeble attempt to think that he wanted to be a sheep rancher and actually introduced some more sheep, but that didn't work and then decided, "I'll go into the cow business".

So in the '50s – in the old record books there's talk about which pastures and how many sheep were there – they gathered them up, and the first attempt was actually to catch them and truck them all down to the harbor and just send them to the slaughterhouse and get some money out of them. And they cleared areas that way and then sent the cowboys in on foot after the more elusive ones – 'cause these were all wild sheep so they're not used to responding to dogs chasing them and herding them – instead of following one guy with 50 sheep in a herd you've got 50 individuals running all over the place. So there's a certain point where the efficiency of catching them and shipping them wasn't economically worthwhile, or the effort wasn't worthwhile.

And so then you just start shooting 'em and leaving 'em out there, and even though you weren't eradicating them, you were certainly lowering the impact, so from one perspective that would be an economically driven conservation perspective. And you weren't replacing it with just a total — let things recover program, you're going to put some cows on it next. But for the health of the island it certainly was a step in the right direction even though it wasn't the complete step. Dr. Stanton's father introduced biological control on the prickly pear cactus because of consequence of the sheep eating all the grass but they wouldn't eat the cactus.

The cactus expanded with no competition from other plants and so he had vast areas of the island that were just total hillsides of cactus that they wanted to knock back so that it could become grasslands for the cows. It was a native species getting out of control so it's sort of a weird perspective from our present day thinking to call that resource management or conservation management but we certainly try to do the same thing with biological controls on non-native things that have gotten out of control.

*Dewey Livingston:* Well they were thinking economics in their –

*Lyndal Laughrin:* Yes. I mean it was rangeland management, it was a way we looked at the west as we moved forward in time.

*Dewey Livingston:* I take it the cactus project there worked?

*Lyndal Laughrin:* It worked very well. And actually cochineal still is present and you can find it on cactus. Cochineal interacts with *Opuntia* naturally all over the southwest. That's the classic little red dye source for native weaving and wool dyeing. All over Mexico you can buy little jars of dried cochineal insects and grind them up and color your stuff for weaving. And so you reach a sustainable equilibrium point where there is a balance between killing everything and survival. And that looks like what might be happening here, because I think one factor is the distance between the cactus clumps because the scale insect isn't very mobile. So if you start increasing the distance you get to a point where they don't get to the next cactus very easily and so cactus survives and cochineal survives and they go merrily on their way.

*Dewey Livingston:* Just one other thing came to mind as you were talking about shooting sheep and pigs. I see around now skulls on posts and things and I'm taking it that those are remnants from however far back. Is that a tradition? Is that something you saw during Stanton and Duffield's time out here: find a skull, put it on a post?

*Lyndal Laughrin:* No. I think that's just human nature. Skulls of all kinds are fascinating and people see these things and now they're a rarity so that's probably even more attractive and fewer people know the pre-history of all those things that were here and sometimes they don't even know what they have so they drag it in to ask you what it is. Some people just like skulls and skeletal things; if you go up to my house you'll see it's ringed (with them)—my wife is particularly enamored—we have all kinds of pig skulls and sheep skulls and cow skulls and horse skulls and fish skulls or whatever. She's always, no matter where we go, dragging something home. So yeah, people just stick 'em up. It's not particularly a religious cult or anything going on out here that I know about anyway [*laughter*].

*Dewey Livingston:* And then one other thing, you mentioned a son, so you raised a family here?

*Lyndal Laughrin:* Well so to speak. I've been married three times. And so the wife I had when I first came out here and I had the only child I have. He was probably five when he first came out here. This is when I was still a graduate student coming back and forth and Michael Benedict was here. So she would come out and he would come out. She didn't *not* like the place but when I started working full time here she wasn't that enthusiastic about living here. And for various reasons we ended up splitting up and my son was probably 12 then.

This was back before home schooling was certainly as easy and as commonly done as it is today. So he'd basically come out in the summertime, weekends over the school year, but he lived in Santa Barbara in Goleta and went to school there. Certainly not like Santa Rosa and San Miguel where they had their own little schoolhouse and the kids studied out there on their own. But he spent a lot of time out here, bringing his little buddies out with him for a weekend or so.

And like I mentioned, Henry actually liked children. He never had children so he enjoyed taking – my son's name is Jon – those kids around in the jeep with him for the day and they'd cruise around the island, and Henry taught him how to shoot, probably taught him to drink whiskey way earlier than they should've learned. Taught them how to drive the jeeps and all that kinda stuff. So it was great experience for kids and it's a great place to do things; fishing, just kind of cruising around the hillsides. My son many times would have, you know you get one of these little baby pigs when it's really little and makes a great pet, they're very socially interactive. They'll follow you around like a little dog.

He still loves to come out here, and actually my granddaughters come out now, not quite nearly as often as he did. But they love coming out here, especially when we had the horses before. You know, just the same thing but from a girl's perspective.

*Dewey Livingston:* Okay, well let's take a break or longer.

End of audio file 4; total time 1:12:11

Audio file 5, Monday morning, May 9, 2011:

*Dewey Livingston:* It's May 9, 2011. This is the fifth digital file, the fifth section of the interview with Lyndal Laughrin, taking place in the morning at the field station.

Now I'd like to ask you what kind of involvement you had in the ranching operation. I understand you volunteered or helped out on the ranch. So, if you could tell a little about how you became involved in that and what you were doing, and then we'll get into as much as you might know about how Stanton and Duffield ran the cattle ranch here.

*Lyndal Laughrin:* Okay. I think I've already mentioned that I came from a rural background with familiarity with livestock. My family always had animals around, horses, cows, pigs, goats, chickens, rabbits – grew up that way. I mean, it wasn't a working ranch, and we didn't use it for making money. Mostly it was for fun and food.

We had our own milk cow, I learned how to milk at an early age. I had to be responsible for butchering the rabbits, for barbecuing, that kind of thing. The cows and the pigs, the calves would be for our own meat, so I helped doing that.

So, I grew up being pretty familiar with animals and handling them, and did a lot of riding. You know, it wasn't my passion particularly. My sister became a typical girl with horses. But I certainly had been around them a lot and liked it.

So, when I ended up out here, I'd spend a lot of time in the early years here, certainly aware of the ranch and watching things happen and just voyeuring on it, so to speak.

As part of my responsibility of running the field station, in one sense a good part of that was to get along with Dr. Stanton and the ranch people and keep relationships on a good level with friendliness and that kind of made a whole big difference in how the whole operation ran here and how the program was perceived by the ranch.

And so, a lot of times you would help just with problems that would come up or whatever. You know, one thing leads to another and, especially when they would have roundup, the branding at certain times of the year. Usually they did their roundups twice a year, the spring and fall.

Sometimes they'd need an extra person just to close and open gates in the corral system, not doing anything terribly cowboyish particularly, but where another body would be helpful.

And so, besides sort of watching that from the sidelines, they kind of knew about me and everything else that I could do, and they finally asked if I'd help on these different occasions. And sort of over time you did more and more. So it got to the point where I actually was doing the branding.

And one year, Dr. Stanton had an automobile accident and hurt himself on the way to the roundup. That year, at that particular season, we were actually going to be castrating. And he couldn't do that, and so I filled in and was doing the castrations.

I mentioned that I'd grown up riding horses, but they were usually leery of gringos riding their horses. There really wasn't any kind of recreational/casual riding because, first of all, they needed the horses in good health for the work. And horses were used to being ridden by the Mexican vaquero cowboys.

But the other thing is, with the cowboy system they had here, usually Mexican boys from Mexico, and in a typical situation where somebody's working here, pretty soon you're also employing their brother, the husband of their cousin, etc. You know? There's like a little network of relationships that you end up with a large percentage of the time, or maybe even all of the guys all related.

And then for some reason, some guy gets a bee in his bonnet that he's got a problem, or he's a problem, and you need to fire him, or he decides to leave, and the whole group leaves all at once because of this family relationship. And if that happens at a critical time, like right during the roundup season, gathering, or whatever, you know, you can be having problems because then you have got to find a whole new set of cowboys.

So, once in a while, that would happen at these times, and I can't remember the earliest time, but I ended up on a horse just because they needed another body, and there weren't enough of the Mexican boys. So, I actually participated in some of the roundups, doing the riding.

But more often, it was on the ground, working in the corrals, and doing that kind of stuff. I didn't really do much at the other times of the year. I mean, when you're out driving around with people, and during the calving season, keeping aware – if you see a cow having a problem, you'll report it to the ranch. You know, like a calf that's stuck, trying to give birth, and they need somebody to come out, help pull it out, that kind of thing.

But I wasn't out during the rest of the year, really helping that much in the way of taking care of the herd. After Dr. Stanton's death, when The Nature Conservancy took over, and then during the following year, they (TNC) no longer wanted to be in the cattle business, and so there was what we called the last roundup.

And at that time, there were probably, oh, maybe three of the Mexican boys that stayed over and sort of worked for The Conservancy during this transition, because there were still cows to be taken care of.

So, they helped with that roundup, and then the rest of the crew was basically a bunch of gringos that got recruited and that were sent out on the horses along with the Mexican boys so that we could gather all

the cattle, bring 'em back in, take 'em down to the harbor and ship them to the mainland.

We actually made a little video of that. My son was going to school down in San Diego County, thinking he wanted to study to get in the film industry, and he was taking video production classes. So, they did some filming of that. Interesting little video produced from that.

Then we actually ended up, besides this sort of ad hoc group that – well, Peter Schuyler, he was The Nature Conservancy on-island person at that time; myself; my wife Ann; Orrin Sage, who was a consultant that they'd hired to figure out just what they should do with the cattle.

And then usually two or three other guys that we knew that had some riding abilities, horse sense, and could get out and ride for the day and not be a problem. 'Cause there basically wasn't really a – I mean, it was sort of fun, but it was a hard day's work, you know, to do that – and it took us quite a long period of time 'cause the cattle were all over the island, and you worked different parts of the island and had to get 'em down to the harbor.

*Dewey Livingston:* What do you mean quite a bit of time, days, weeks?

*Lyndal Laughrin:* Oh, yeah, yeah. It stretched over months, actually. I can't remember the – it was probably in the order of six months by the time we got all the normal cows. And at that time, the cattle herd was – I mean, the main way they ran the ranch was the main part of the herd was split in half, and then those halves sometimes had halves themselves.

So, one big half was out at the west, and all of the gathering there would end up at Christy corrals. The other half was out to the east, and that gathering section would end up at Del Norte ranch – Campo del Norte with the other corral system.

And so, we had probably on the order of 800 cows with calves, and another 50 or 60 bulls that were part of what we called the normal herd that were worked and moved around and were used to people dealing with them.

But at the same time, there was this wild herd, quasi-feral, that developed down in the bottom of Laguna Canyon on the south side, probably 80 to 100 animals. I don't remember the exact number, but a good-sized number. And there were some bulls there, so they were reproducing and breeding and sustaining themselves.

But they hadn't been handled in years. So, after we gathered and shipped all the normal cows and went down to get those guys with this group of not-that-experienced cowboys, so to speak, it just became a giant big circus because these cows, they'd get in a bunch, and then all of a sudden they'd split up 'cause they weren't used to following one cow and staying in a nice little group while you moved 'em down the road to the next place. They'd start up a canyon, and then all of a sudden, they'd just freak and go all over the place. We even had a

veterinarian come out and tried to capture some with a tranquilizer gun. That didn't work either.

So, after some time of fooling around and basically realizing, "This is not working," that we need some better expertise, we actually hired a group of professional cowboys from Santa Ynez Valley and had them come out. And they pretty much had the same problem with trying to gather them and herd them, and so the end result, we basically had to catch them one at a time.

So, these guys would rope them and tie 'em up, and then we'd put 'em in the back of a truck and drive 'em up and bring 'em back to the ranch and put 'em in a staging pasture here so we could get 'em all together, and then bring 'em all down to the Prisoners' Harbor to the corrals there for the boat ride back to the mainland. And that worked pretty well.

We did get all of the animals out of Laguna, but we had another breakdown when we tried to move the main group that we had at the ranch down the harbor. We lost a bunch here, and then the escapees just kind of got ignored. And so, they became a small group that The Conservancy just decided to live with here at the ranch.

In the early days of The Conservancy's takeover and responsibility of running the whole place here, they ended up keeping one of the Mexican cowboys for quite a while, along with his wife. And the couple that ran the ranch for TNC wanted to keep the cows, and then they'd shoot one once in a while for meat and butcher it, and it was worth having them around for that. But over time, that small group died out. In fact, the last one just died this last year.

*Dewey Livingston:* So, the cows belonged to TNC, they weren't considered property that Santa Cruz Island Foundation would have wanted?

*Lyndal Laughrin:* No. The division of that ownership at Dr. Stanton's death was that anything owned by the Santa Cruz Island Company became TNC's, because TNC was actually acquiring the Santa Cruz Island Company. That was how the ownership of the island resided.

And so, Dr. Stanton's personal belongings were the things that went to his foundation — so his books, his antique furniture. But anything that the company had purchased or owned, like the trucks, the tractors, the equipment on the island, the cattle, the buildings, that kind of stuff transferred to The Nature Conservancy.

*Dewey Livingston:* Okay. Who was it that they hired from Santa Ynez?

*Lyndal Laughrin:* Ralph Lausten and three other guys. I know Pete Healy, who has a Santa Rosa Island connection, he's married to E. K. Smith's daughter, Karen. And I forget — there were two or three other guys.

*Dewey Livingston:* Was Ralph the crew chief?

*Lyndal Laughrin:* Yes. Ralph was kind of the head cowboy.

*Dewey Livingston:* He came back later to get rid of the sheep on the east end.

*Lyndal Laughrin:* Mm-hmm.

*Dewey Livingston:* And then moving the cattle from Christy, you're just moving it up the road?

*Lyndal Laughrin:* Yeah, traditionally just follow the road system, and the island was all divided up into big pastures so they could move the cows around at different times of the year for the grass conditions and not have a complete total destruction impact in one place by leaving them there all year round.

And so, there was a system of fence lines. Sometimes those worked along the road so you could use that, and the other times, they'd put in just little short wing fences. So, if there's a place where you want to move 'em towards and that has obviously a place that's got a potential where they could break out and escape, you might have a little secondary fence that helps with that, but most of these cows were fooled with and worked often enough and moved around, that once you got 'em moving, they kind of seemed to know the system and you didn't have too many escapees most of the time.

That would be especially when you're dealing with the old cows and the old bulls. It's like the year-olds or year-and-a-half-year-old youngsters that you separated (from their mothers) and they're going to be the ones that are sent to market that cause you the most problems 'cause they're younger and friskier and don't know the system quite as well.

Basically, the corridor was from the Christy corrals up the Centinela grade over through the Central Valley, down Portezuela grade, and here to the ranch. And usually that move was made in one day, and they might rest here (at the ranch) overnight and then down to the harbor the next morning. And there they would be put in the pasture that's immediately to the east, goes up that first hill — that would be the overnight or the holding pasture for whatever time period— you know, it usually wasn't terribly long, but sometimes there were weather problems, and the boat couldn't come exactly when you wanted it.

But they'd go in there, and then the next day, or the day or the evening before the boat is going to arrive, you'd move 'em down into the corrals themselves. And the corrals were all built and set up so you had little pens that corresponded to the configuration of the boat deck pens.

So, depending on what size animals you're shipping, we had to distribute the weight on the boat evenly more or less, so, you could have more calves in one little pen than you could have, like, big bulls or cows. So you'd put whatever number's appropriate by what you're shipping, and the pens would be staged so that the first one goes into the back of the boat.

So, you're basically moving them out onto the pier in these little bunches that correspond to each compartment on the boat. So, that's all pre-staged, 'cause the boat crew always liked to be here at first light. So, you're starting the first animals onto the boat just as you can barely see, you know, kinda run 'em out the pier into the chute and onto the boat.

And sometimes they would do repetitive trips in the day – same day if there was enough time, depending upon however many animals you're shipping. And the Santa Cruz Island Company used to have their own schooner, but that sank in Prisoners' Harbor in the early '60s. And I'm not sure how much that was used for shipping cattle, but all during the time that I was involved and saw things happening out here, they basically chartered the *Vaquero* from Santa Rosa Island.

*Dewey Livingston:* *Vaquero II?*

*Lyndal Laughrin:* Right. And when I first started helping with them, a lot of the animals went to the mainland, and there they would get unloaded in Port Hueneme, which had kind of the reciprocal arrangement of a little chute that would come down just to the boat deck for tide levels, up a ramp, and into a little holding pen, and then into the big trucks.

Usually they'd send them to a feedlot situation, where they would be rested for a day or two, and then put on the right weight, and then marketed. In the later years, though, they ended up being shipped to Santa Rosa.

We'd sell them to Al Vail, and they'd go directly over there, which seemed to work really nicely for both parties because then all the boat costs were picked up by the Vails, and the calves were kind of pre-adapted to island life, so they usually didn't lose much weight during the shipping and going to someplace new. You know, going to Santa Rosa Island is much more like Santa Cruz than going to Bakersfield or wherever you ended up at the next stop over at the mainland.

*Dewey Livingston:* They shipped steers to Santa Rosa?

*Lyndal Laughrin:* And heifers. The herd on Santa Cruz Island was pretty much entirely Polled Hereford, they're the red guys with the white faces and no horns. Every once in a while you'd have a genetic throwback, and they would have horns, and you'd usually try to catch them early enough so you could cut the horns off so they don't grow.

It was a cow-and-calf operation, so you're basically having the babies born here, keep them for a year at least and maybe a little longer; the age and timing of shipping somewhat revolved around grass conditions, whatever the rainfall year was like and that kind of thing influenced that, and also the market price for the cattle.

So, there'd be some adjustment based on timing, based on those factors. But then usually Henry Duffield was the one that figured all

that out. That was his expertise, the range conditions and the weight of the cows and condition and when to market them.

And they would periodically bring in outside bulls to keep the genetic diversity going. But at the same time, it was a pretty high-quality herd. And so they would want to keep some of their own young calves and heifers for breeding, and occasionally, some of the bull calves.

So, that would be mostly Henry's decision – you know, his knowledge and experience of what a good Polled Hereford would be. So, there would be a certain number of the young ones every year that you would pull aside so those guys wouldn't get castrated if they were males, 'cause they had a whole branding system and then a marking system. They would watch them, and the next year, if they were still looking good, then they would most likely end up staying on the island.

So, the young ones being sent for sale would be heifers and steers. Usually if they're going to get shipped, the males are always castrated. So, the males would always be steers, but heifers could be shipped also.

*Dewey Livingston:* Did Henry make the decisions on the counting, so to speak, in the pens down there as you're getting ready to ship? Who made those calls?

*Lyndal Laughrin:* Well, that would be both Henry and Dr. Stanton. I mean, when you knew the size of the pen, you'd try to eyeball the weight of the cattle, depending on which ones you're shipping. There were a certain number of cows would be so old that they'd be having problems birthing.

There would be some that, maybe, were sterile and you didn't realize it, so the first year they didn't have a calf, they're sort of forgiven and wait another year. If they do it two years in a row, then they're culled also.

And there'd be problems – what they called pink-eye infections in the eyes, and sometimes they'd have obvious tumor things and so on. There'd be a certain number of animals, mostly of the older animals that would be chosen to be sent off the island. So, it depends on what you're shipping and how you arrange those little pens for the weight.

*Dewey Livingston:* During roundups, I'm going to take it you stayed at Christy, you stayed at Norte. Is that true?

*Lyndal Laughrin:* Well, the rounding up, you'd go out and you'd bring everybody in, and then you'd have to check and see if the numbers correspond at what should be there. You might have to go out and do another sweep in the pasture, or something like that.

So, sometimes it'd take a couple of days to gather them. So, yes, the cowboys would stay at these places usually overnight. The gringos, myself, Dr. Stanton, Henry, you know, usually didn't stay out there. You'd just drive out and come back to the main ranch at the end of the

day. There were a few times when I actually helped them several days in a row, and I would stay out there with the cowboys. But, it would depend.

You know, if I had people at the field station I needed to be dealing with, I'd usually come back every night and check in on them. If there was nobody here, I'd have more flexibility as to whether I needed to come back or not.

*Dewey Livingston:* Could you describe the setup of those sites, the cooking, sleeping, et cetera?

*Lyndal Laughrin:* Okay, Christy is one of the historical ranch sites that was basically a satellite operation of the whole ranch's working program during the Caire era, when the whole island was owned by the one family.

And the main ranch here in the Central Valley was always the main headquarters and the hub of everything. But I think particularly because of the vineyards and the need for a lot of work horses, draft horses, they needed to raise hay to feed those year round.

So, a lot of these outer, flat, old marine terraces were good potential areas for doing that. And so, these crops would be out at the very east end, out at the very west end, Christy, Fraser Point. And this was all during the time before vehicles were out here. So, to work out there you had to walk out or ride a horse or buggy or whatever.

So, obviously you couldn't go out there and work for the day and come back to the ranch. So, these satellite ranches were developed. And so, by the time the Stantons came on board, that was no longer really the pattern. They weren't really using those outer facilities. And, of course, the eastern part was now owned by a separate entity anyway.

So, when they started doing the cattle business and had the herd out there, so parts of the year, you'd need to be out there two or three days in a row. So, it just increased efficiency to have somebody stay there rather than traveling back and forth twice a day.

So, they did fix up the two-story adobe structure that's on the south side of the creek out there. And that became the cowboy's bunkhouse. There were rooms upstairs where they could sleep, and downstairs was a big kitchen/bathroom complex.

And then, later years, they fixed up what's called the Casa Vieja, the first little building as you come into the facility, and that actually became the core for the hunt club operation.

*Dewey Livingston:* It was off limits during roundup then with the cowboys?

*Lyndal Laughrin:* No, no, because there were two separate buildings. And so the cowboys could stay in their rooms across the creek, and the hunters were using the other building. So, during the winter/fall, there was overlap when they would go out to stay.

Usually, by the time the hunting started, the fall roundup would have probably already been done, but that was also the time when the cows were dropping calves, so basically right around Thanksgiving was the approximate general time you'd expect to see first calves. So, a lot of times the cowboys would have to be out there fairly frequently just to cruise around and make sure the cows were all right and not having problems. So, there would be hunting going on at that same time. So, they did overlap in the use of facilities out there.

And then the other part of the herd, over at Campo Del Norte, that was actually one of the few satellite operations that the Stanton family themselves built and initiated. And so, that was a wooden bunkhouse structure, and then the corrals were around it. And that was, I think the date's in the early '50s somewhere. I forget the exact year. But the same idea that, you know, the boys would spend the night there and have a place to cook.

*Dewey Livingston:* So, they'd cook for themselves?

*Lyndal Laughrin:* Yes, when they're out doing the cattle work, right, they would cook for themselves.

*Dewey Livingston:* Did you get in on any of those meals? What did they tend to cook?

*Lyndal Laughrin:* Oh, yeah. It was pretty basic typical Mexican food, a lot of salsa, you know, tortillas, beans almost every meal. And then depending on – lamb, chicken, you know, hamburger.

*Dewey Livingston:* They'd barbecue?

*Lyndal Laughrin:* No, they didn't seem to be much on barbecuing. They'd come in, whip up a meal, go to bed, get up early in the morning again. I mean, even Dr. Stanton, at the ranch, with friends and stuff like that, barbecuing was not really part of the scene.

*Dewey Livingston:* And the sleeping facilities there, was it all right? Were there little cots? Was it comfortable?

*Lyndal Laughrin:* They were just normal beds, and you'd usually bring a sleeping bag. I don't know about the cowboys. They probably had some kind of regular bedding that they just stashed there or something. Yeah, it was fine. It wasn't outstanding luxury by any means, but it wasn't camping on the floor. Just a bunkhouse.

*Dewey Livingston:* Did any of these Mexican cowboys sing, play music, things like that?

*Lyndal Laughrin:* No, I don't recall any of that. No, there weren't any campfires. *[Chuckle]* No romantic visions of the Old West. Didn't seem to happen out here.

*Dewey Livingston:* Let's talk on some of your observations on their use of the island for range. I understand it was divided up into pastures across the area. Were there some areas that were not at all used for cows?

*Lyndal Laughrin:*

Yes. The remote rugged uplands, this whole north side of the island. Basically from Prisoners' Harbor all the way out to the west end. And so, there would be a fence halfway up this slope in the valley here on the south-facing north side of the central valley, on the south-facing slope. And from there over to the north shore, that whole area was fenced off from the cows. It was just too rugged – no roads, nasty topography. So, that was a big area left to the sheep.

And, of course, at the east end, there was a fence – not on the property line, because the property line was the skyline ridge, kind of rocky, rugged, hard to maintain a fence there, so it was actually down on the Stanton side a bit. So, there was this one piece of Stanton's property that was basically left to the Gherini's sheep. We called that No Man's Land.

And on the south side, there would be areas – a couple of big pastures that were sort of in-between topography. They weren't the steepness and ruggedness of the north shore, but they still had mountain ranges and up and down stuff. And those had fairly large pastures. They would include several rugged mountain tops, and the cows wouldn't go up into those areas much.

And then some of the lower parts, that's where they would have the year-old yearlings, after they're taken away from the cows. They would be in these areas that would be – you know, the older cows would be less inclined to get out of the flatlands and the rolling country. So, the younger ones would be able to scramble around up in the hillsides farther and find grass and stuff. And so, they were sometimes put into these sort of in-between pastures.

But primarily, it would be the Del Norte area, out by the Navy base and through there, sort of in that Monterey Shale area where there's a good grassland complex.

And then the lower canyons of the western pines, going out towards Christy, all around Christy, over into Sauces and out to Fraser Point. And so those sections had a fence pattern that allowed you to put animals in one area, let them graze, and then move them to another area the next part of the year.

I think part of the timing of the movement would be based on how the grass dries. So, out on the more-exposed, windier areas, the earlier it dries out and faster. You'd have them (the cattle) earlier there, and then move 'em back to where it's still greener later, and maybe more of the water would – sometimes they'd rely on natural water and springs, and then they also had a series of springs that they'd tap in with pipelines and then feed the water into a big holding tank, and then from there go down to a watering trough for the animals, so you could have water in areas that they probably wouldn't have used otherwise because of the lack of water.

So Henry would keep all that in mind as he's cruising around. I mean, everything sort of moved in the seasonable calendar time frame. But

you would get these years where you'd get early rains, and then maybe no rains. And that would of course, affect how the grass grew.

And sometimes you'd have to ship early because there's just no more range, or it's getting small, and you wanted to save what you had for the cows you want to keep. You know? And those would be the years they'd probably downsize the herd more drastically.

So, you'd have a target number of animals, but you're just kind of constantly over and under, depending on forage conditions.

*Dewey Livingston:* Did they ever supplement feed?

*Lyndal Laughrin:* There were a couple of times when they had to do that for the animals that they kept. Usually it would be one of these molasses-based things that would get shipped out, and you'd have to drive around periodically, throw the blocks out in the field for them.

*Dewey Livingston:* But no shipping, that you know of, of hay or feed from the –

*Lyndal Laughrin:* No, I don't recall ever bringing hay in. I mean, they did grow hay. This was according to Henry, and they had hay in the barn for a long time. When Henry first came out here, they used to grow hay in the valley here, kind of where the vineyards used to be. And they had, mowing machines and hay balers. And I don't know how the cattle were being run then, whether it was different and not so much cow and calf or not.

But that was one of Henry's early decisions — that it was just a lot of fooling around and waste of manpower, and it would be better just to run the place on the natural range without relying on the hay. And so they quit growing hay and a lot of this stuff just sat in the barn and became straw and lost all its nutrition probably.

But I remember that sat in the barn for a long time, until The Nature Conservancy took over. We finally moved it all out of there and cleaned the barn out and turned it into a warehousing/storage place.

*Dewey Livingston:* You talked about the Norte area, and the south side, and out at Christy. And I'm going to assume that the Central Valley here was some pretty good range. And so, did they range all the way down to the ocean?

*Lyndal Laughrin:* Well, the Central Valley, particularly from the ranch east, was primarily used for the bulls. So, in the non-breeding season, the bulls were brought back here to the valley, and then they're put out there in those two pastures. And they'd move them back and forth from out towards the end to back towards the ranch more, depending on what's going on.

The part that we're in on the west side of the ranch, from here, going up through the valley towards – pass the swimming hole at Cascada and up into there, that would be the young animals again.

So, pretty much the cows stayed out on each east and west section. There would be smaller pastures here in the valley that they would use when they were moving them, so on their way to the harbor they'd have a place to stop, hold them overnight, or a day or two, or whatever. You know, short term. And then from there, on down to the harbor.

*Dewey Livingston:* And so there were no cows over in the Pelican Harbor area?

*Lyndal Laughrin:* No, that would be way too rugged for cows.

*Dewey Livingston:* Did you see the sheep over there then?

*Lyndal Laughrin:* Oh, yes. That was totally overrun with sheep from there all the way to the west end. I mean, that was the primary area left to the sheep. That's a lot of country there. So, you'd have a big area for a lot of sheep, and then the other areas where you would have densities, but smaller expanse for them to range in would be like the rugged mountaintops over above Laguna, Sierra Blanca area, that section.

*Dewey Livingston:* We hiked up the new trail behind the chapel there yesterday, and looked down in the canyon to Prisoners', and up above, there's this little patch of almost flat pasture in the middle of totally rugged slopes – do you know that little bit that I'm talking about? I was speculating that would be a favorite little spot for the sheep.

*Lyndal Laughrin:* Oh, yeah, that was probably bare rock until 10-15 years ago. Yes, for the sheep – nothing limited them. In old pictures, it looks like the moonscape over there and in certain areas you have just no ground cover, no seedlings, no recruitment of any of the young woody species.

You have old individuals that obviously established themselves before the sheep, and were able to grow up, and then they'd be browsed up about shoulder high, as high as sheep could reach.

There'd be a flush of little green seedlings of annual, non-native grasslands, Mediterranean introduced grasses, in the late winter, early spring, after the first rains. And then they'd get munched off pretty quickly.

And any seedling that tried to establish itself of a woody species would get munched out fast. And so, by summer and fall, it would just look like one of the roadbeds out here in front of us. You know, just bare ground, rocky. A lot of erosional features. So, that persisted for many years.

*Dewey Livingston:* Being a biologist, could you have an opinion on the range management practices here for the cattle?

*Lyndal Laughrin:* Well, if you want a sustainable cattle ranch, you want to keep the vegetation reoccurring every year. So, from one perspective, you need to manage it some way and not abuse it. The conflict is, a lot of that range, that grassland certainly that we're using now all over California,

is no longer the native California grasses. It's all introduced, exotic, non-native, mostly from Mediterranean origin.

And so, from the perspective of having native stuff, you don't want that. But that's the kind of stuff that works well for cattle. Because if you put out the seed early enough, get enough of them, and they put out a lot of seed.

So, if you eat a bunch of them, there's usually enough seed to have another go around the next year, whereas with the perennial grasses, they can't take heavy grazing sustained for a long period of time. So, you have to be a little more careful.

You know, from the perspective of erosion and other things like that, having grassland that you're managing for cattle, you're probably improving holding the soil. The cows are probably more discerning in what species they're eating.

So, maybe some of the woody seedlings that start to establish don't get eaten as readily by the cattle as they would've been by the sheep. That's sort of speculation on my part, maybe. I guess it's what your concept of range management is. If you're managing the range so you have sustained vegetation, cows are better.

If you're managing it to bring back native species and have woodlands, that goes against what you're trying to accomplish because you're losing space that you could have grasslands for cows to graze in, bringing in things that they're probably not going to eat once they (the plants) get to be adults certainly.

So, from a biodiversity, restored native habitat perspective, cattle's certainly not going to be the answer in the long run for that. If you're improving the quality of severely abused landscapes, and you have to sustain your operation economically, cows are a better way to go. But it's obviously an age-old conflict in the Wild West of range management and grazing.

*Dewey Livingston:* Well, the difference here appears to be, – correct me if I'm wrong – these islands didn't have native grazers.

*Lyndal Laughrin:* Right.

*Dewey Livingston:* And whereas on the mainland, you had grasslands that had elk and et cetera. Has anyone developed a picture, in a sense, of what the island was like beforehand? Which always brings to me the question of why would they have started a grazing ranch if there wasn't already good grazing land. And then my understanding is that grazing land is sustained – in the native situation – by native grazers. Is this pictured that there was a lot of grassland here?

*Lyndal Laughrin:* I can't answer that very well because I'm not aware of any good descriptions of what it was like before ranching started out here. I mean, we have lists of species, but we don't know the configuration, the extent.

You can go backwards from what you see now, the way it's changing now. It looks like you're probably going to have mixtures of shrubs. You know, it's obviously going to be a mosaic – depending on the soil and exposures and that kind of thing, microclimates. You're probably not going to have the marine terraces at the west end being all just wide-open grasslands. You're going to have a lot of brushy stuff all over the place.

And even on the mainland with the native grazers, when you had a native grassland and habitat, again, they were not confined, they were temporarily using a place, then moving off somewhere else, migrating. So, you don't have an impact that's confined spatially and temporally that might be different from ranching operations.

I guess it depends on your perspective. If you back up a ways here, you have a mosaic of topography. So, you would have native stuff on the hilltops and in the very bottoms of the canyons, whereas out in the more flatlands and rolling places more shrubs – I guess it just depends on what you're looking for.

*Dewey Livingston:* Sure, we don't know what it looked like. I was thinking, with the core sampling at some point they'll get more evidence of what the conditions here were.

*Lyndal Laughrin:* Yeah, but again, it's just going to be a list. It's not going to give you a picture. And you can maybe even get some idea of abundance by relative amount of pollen or seed of one thing or another. I don't know. It's an interesting question, but difficult to interpret with a lot of faith, I think.

*Dewey Livingston:* I just didn't know if any specific study had been made in that direction to determine that. So, thinking of the Stanton's management of the island, did you ever know of any seeding activity, or conversely, any work to rid certain areas of invasives?

*Lyndal Laughrin:* Well, I mentioned the only seeding would have been the farming here in the valley for hay. So, it's probably some oats, a type of *Avena* probably and also alfalfa. There might have been some other farming. You know, there have been stories about farming potatoes in the Caire era, out towards Saucers Canyon. But other than that, no range enhancement by introducing seed. And working with invasives, the only thing, I think I mentioned a little bit about trying to control the prickly pear cactus with the cochineal.

But other than that – well, star thistle. I remember Henry having the boys working in fields here around the ranch, chopping that out with hoes. But, that was more just – try to reduce it 'cause it's not good for the cows or the horses.

*Dewey Livingston:* Was fennel an issue during the ranching period?

*Lyndal Laughrin:* No. I mean, we do have photos of (fennel), particularly, that hillside that I mentioned that was the holding pasture down at Prisoners'

Harbor in the 1880s. Obviously, fennel was already there. We don't know the real origin, how it got here, whether it was introduced as a spice vegetable crop in the gardens here on the ranch and escaped, or came with livestock in some way.

But the thing about fennel, it's definitely as good a forage as a lot of other things, and the cows ate it, particularly when it's in the leafy stage, before it puts up the flower stalks in the later summer.

Both sheep and cattle were grazing it constantly. So, people raised this issue, that when we moved the cattle off, it was done rather precipitously and prematurely. Then we ended up with this big fennel problem. The fennel just all of a sudden erupted and spread all over the island.

My perspective is there was probably a lot of fennel here that you just didn't realize. It's a long-lived plant with this huge root system. And so, if you're constantly grazing it, you could still have a lot of fennel, and it's not conspicuous.

The minute you walk away, it's allowed to go through it's whole stage cycle – it has definitely probably spread, but it was probably here in much greater abundance than people thought it was when they first saw it pop out.

But yes, there was no attempt to be aware that it was going to be a problem, or become a bigger problem. And no incentive to reduce it.

*Dewey Livingston:* It was under control, so to speak.

*Lyndal Laughrin:* Yeah, it's just another something the cows and the sheep ate.

*Dewey Livingston:* So, did you have any relationship with the Gherini ranch?

*Lyndal Laughrin:* Not really. No, we didn't really go over there till later years. After The Nature Conservancy took over, and the park was acquiring the east end, the only interaction we had there was that my wife got one of the baby horses from that herd of wild horses that they had over there. So, she would go over there for a bit of time and tame it down so she could get it broke to lead. Then they ended up walking it over the mountain from there over to here.

*Dewey Livingston:* Over the old trail.

*Lyndal Laughrin:* Definitely.

*Dewey Livingston:* Who maintained the roads, the fences, the water systems? I'm going to think the cowboys?

*Lyndal Laughrin:* Oh, yeah. The cowboys did the fences and the water system, all the pipelines for the springs and whatnot.

Probably starting in the middle to late '70s, I actually ended up running the bulldozer for the ranch doing a lot of the road

maintenance. And did that up until probably six or seven years ago, when the TNC person that's now running the ranch operations, David Dewey, started working out here. He's a good tractor operator, and he took over road maintenance. But I worked for Stanton and the ranch, the Island Company, for quite a few years, doing the roads.

*Dewey Livingston:* To grade the road, say, out to Christy, how long would that take?

*Lyndal Laughrin:* Again, it really varies by the year. So, big storm years, you'd have more damage. Certain roads and certain soils take care of themselves almost, and you can attempt to construct the road so that it helps itself in terms of the runoff, and putting in these little bumps to control water diversion, that kind of thing.

The more rocky upland areas, you don't really have to do much work, so you can usually travel pretty fast. But, going down into some of the bottoms of these canyons, there would be certain places that would always be a problem, and it didn't matter how much –how little rain you had, you could end up with that road being closed.

The normal pattern would be, wait until the rains are over for sure 'cause you don't want to do the roadwork too early, and then a big rain comes in, and you have to go right back and do it over again. So, you don't usually start till about this time of year.

You know, going through the valley takes a lot longer because there are more places that have problems. I basically did the roadwork as kind of an after hours job and on my time off kind of thing. I mean, part of it was just helping support the operations for the field station, too, because if the roads aren't available, people can't get out to where they want to work. So, it was kind of a help the ranch/help ourselves kind of thing.

So, a lot of times, I would just have two or three hours to do it, so I'd just go partway. And so it would take – if you had a dedicated driver, sometimes with these really wet years, we would just hire a guy to run the tractor, and he'd be out here for a month and could do the whole system. Me, working after hours, or a couple days a week, on the weekends, things like that, it might take me twice as long to get around the whole pattern.

*Dewey Livingston:* The cowboys working fences, keeping the water going, et cetera, was there a seasonal group who came during roundups, and then their permanent crew here?

*Lyndal Laughrin:* No, not usually. They just operated with – oh, probably around a half-a-dozen cowboys, never much more than that. It wasn't like the days of the sheep and the vineyards, where you'd have to have a lot of guys come in to pick grapes or shear sheep. No, it was mostly a steady crew.

And like I said, once in a while, they'd all leave together, and you'd have to scramble around and get somebody to come in and help. But no, there wasn't a seasonal peak.

*Dewey Livingston:* Stepping back a little: the vines, the vineyards, was there much of that left, and has that even changed since the last decade?

*Lyndal Laughrin:* No, by the time I got here, basically the vineyards had been totally removed, plowed. I think they started using part of the bottom land (in the central valley around the main ranch) for the hay fields after that time frame. But what we did have would be a few plants that escaped destruction and persisted. Then they would be up, kind of in the edge of the chaparral, and a couple out here to the west in a couple of little arroyos.

And people had taken cuttings and Dr. Stanton had been interested in this. Ralph Philbrick, who was the director of the Santa Barbara Botanic Garden, I think I mentioned early on he came out here, and Dr. Stanton used his expertise to help put together a little native plant garden around the swimming pool area. And so, for part of that they took cuttings of these grape plants, and so around some of the fence work around the main ranch yard, and over around the chapel, they established these cuttings from some of these original grapes.

And then in more recent times, a bunch of people have taken cuttings because they were interested in making wine from Santa Cruz Island grapes again. My reserve steward, Brian Guerrero, up by his house, he's got a bunch of Santa Cruz Island grapes growing.

Through The Nature Conservancy, I think, Geoff Rusack has taken a bunch of cuttings – he's married to one of the Wrigley daughters, and has interests over on Catalina Island – and they've got a vineyard growing at Rancho Escondido in the central part of the island. They have quite a nice little setup with Santa Cruz Island grapes growing there. I don't think they're old enough to be having fruit for making wine yet, but pretty soon.

And then over the years, a few other people have taken cuttings. I know Steve Gliessman, from UC Santa Cruz in the agroecology department, has had an interest. He has a small vineyard over in the Cuyama Valley, and he's got a bunch of cuttings and plants started from here.

So, there are plants available. But I'm not sure that everybody's really identified exactly which stock survived, and what these grapes are. But it's interesting to think of having a Santa Cruz Island wine available again some day.

*Dewey Livingston:* Could you tell what you will of the period when Dr. Stanton, as I understand, was learning of the national park service plans for the potential Channel Islands National Park?

And this is more from your personal experience, what you may have seen or been involved in, if at all. How did Dr. Stanton react? Did you have conversations with him about the park service bill that was happening? And I understand this might have led to his relationship with The Nature Conservancy.

*Lyndal Laughrin:*

Well, Dr. Stanton and, I think, the other private land holders of the island system – I don't think any of them were terribly in favor of having their property taken and put into the park. When they became aware (of the government's interest) and that whole evolution, I'm not really sure of the date that that started or the time frame.

Stories I've heard relate to the idea that, it seemed like on a political election year cycle, there would be interest put out into the media and thus generated about the idea of expanding what was basically the Channel Islands National Monument that was formed in 1938, I think, with Anacapa and Santa Barbara Island. And then in later years, San Miguel was added to it administratively. The Navy still retained (and still does) the outright ownership of the island, but they allowed the park service to have access and do management things there.

One story I had heard was that the Superintendent of the Monument was responsible for instigating some of this idea and actually had an encounter with Dr. Stanton to the effect that he gave the impression how nice it would be when he got to live out here in Dr. Stanton's house as the Superintendent of the new park. And so, of course, that obviously did not sit too well with Dr. Stanton. So, he didn't have really very good relationships with the Monument people at that time.

When the pressure evolved to the point that they actually started the process in Congress to write the bill that became the law, I don't know. Certainly Stanton – all the stories I had heard, and this was before I really had direct conversations with him – he basically didn't think the island needed more people running around it and wasn't terribly impressed with the park service's attitude, based on his perspective of how other parks operated – that they were encouraging more and more visitation to places like Yosemite.

And it wasn't like, "We've got enough people here. We don't need to have more people coming and be restrictive." So, he wasn't comfortable with that attitude. And I think it was Bill Ehorn, when he came in as the last Superintendent of the Monument (and as the first Superintendent of the new Channel Islands National Park). And he saw that things were progressing more and more towards the idea of becoming a park, and that the attitude of these owners was more and more of a problem.

So, one of his little missions and goals was to cultivate better relationships with the island owners. And he went out of his way to try to interact with Dr. Stanton and the Vails in a more positive sense. And I think he did do a lot of good work in relationships' building.

But at the same time, these guys still lose their places. They had a lot of time invested and their emotions. And no matter how friendly you might be with somebody, you weren't happy about having the place taken away from you.

But in Stanton's situation, he wasn't the sole owner of the island particularly. It was owned by the company, and the company had been

formed by his father. And when his father died, the ownership of the company was transferred in three parts: to his wife, Mrs. Stanton, and to his two sons, Edwin, Jr., and Carey Stanton.

Edwin, Jr. had been killed in the war, and so his third (interest) went in trust – because he had one child before he was killed – to his son, Carey Stanton’s nephew. And then his mother had a stroke, and so Carey Stanton controlled her one-third. So, he basically had the power of the company via the two-thirds against the one-third.

And as his nephew got older and became old enough to be whatever the age is that you can start exercising your voting rights in the company, Dr. Stanton realized that his nephew didn’t quite have the same attitude about preserving the island, keeping people off. He started thinking more, like, “This needs to be like Catalina. We need to be making more money out of this place. You know, we should think about developing stuff and whatnot.”

And so Carey Stanton realized – Carey Stanton had never married, had no children himself – if he goes forward in time and he drops out of the picture, and everything’s left to his nephew, that it could be a whole different scenario out here, and he didn’t want that. But he also didn’t really want it to end up in the park. And so, he started looking around for different options for the island’s future.

And again, I wasn’t that closely comfortable with him in terms of having these kinds of discussions about this kind of a situation. So, I don’t really have first-hand knowledge. I do know that he became very good friends with Dr. Mildred Mathias. I think I mentioned her earlier. She was one of the founders from the University of California of the Natural Reserve System, and he highly respected her and had her and her husband out to the ranch, staying here quite often.

And at that time, she was a board member – maybe on the national board – for The Nature Conservancy, and certainly on the California board. And so, I don’t really know whether they had discussions about – you know, the Reserve was already operating here – whether the University would be an appropriate situation, and whether or not they even approached the University, or just through discussions with Dr. Mathias that this was probably too big of an operation for the University to be owning outright and whatnot, and also that the way things were working – they already worked just fine.

And so, maybe she connected him with The Nature Conservancy. This is sort of after-the-fact speculation, but certainly the relationship was in place such that it would make good sense. I do know that even if she did not initiate his decision, that his respect for her and her credibility went a long way towards solidifying his decision to make the arrangement with TNC.

So, that’s how I think that the initial kind of thought process started. And then from there, starting to actually talk to people within the Conservancy and develop an idea of how it might work.

And then my understanding was basically they got to the point where it was, “Okay, if The Nature Conservancy will go talk to my nephew and basically get agreement with him and purchase his share of the company, I’ll donate my share. You pay off my mother’s estate, or I’ll take the same amount that you work out with him, and finish off the inheritance tax for my mother’s estate, and we’ll do that.”

And apparently one part of that was that they had to, when they did approach his nephew, and they agreed on a price, that they had to have the rest of the deal signed, sealed, and delivered by a certain date.

And so, as that date got closer, the nephew realized how low he’d settled for, basically, how undervalued he’d thought the place was. And so, The Nature Conservancy and Stanton realized that if they didn’t sign their part of the deal off by this date, that they would have to go renegotiate with his nephew probably for a much, much higher amount.

And so, some of the things that they kind of left unsigned with more of a gentleman’s agreement were issues that came back to cause problems, like what to do with the sheep, and things that didn’t get actually written into the legal documents that well.

But they did get the deal done, and we supported it. We helped – there was a lot of fundraising that had to be done for The Nature Conservancy and interacting with people – one of the deals they had was, you can own an acre of Santa Cruz Island. One of the fundraising ploys was, “Buy an acre of Santa Cruz Island and help save it.”

And so, they figured out what it would cost per acre and donate that to TNC for the island. So, my wife and I each bought an acre of Santa Cruz Island. I think it was 75 bucks or something was the figure that it came out to be. And, we went to meetings and public things to talk about the idea and why people should support it.

So, it did happen. And that happened right before the whole park issue came to Congress. I think that was in ‘78, and the park was established in 1980. So, it was right at the end of Carter’s administration.

And as a result of Stanton’s doing this deal with The Nature Conservancy written right into the park law was, the statement that the feds wouldn’t take property owned or optioned to The Nature Conservancy on Santa Cruz Island. So, that was why this part was excluded from the park.

*Dewey Livingston:* So, then what was the visible change here to you after that deal was made?

*Lyndal Laughrin:* Well, the deal that Stanton negotiated, and how it ended up was that for 30 years, or until his death, he was allowed to reside out here, run the cattle operation, continue what he’d been doing. Basically, the idea – like a typical conservation easement, you wouldn’t abuse the place. You wouldn’t try to develop. You know, those were all restrictions which he wanted anyway.

And so, immediately it was not much changed. He was still doing the cattle stuff. And as I mentioned, gradually, some of the TNC folks wanted to have access, and so they built this little cabin structure so they could start bringing people out here and doing things and not be in the way – wouldn't be in Stanton's front door.

But then in later years – we talked earlier about the issues with the hunting and wanting to remove the sheep – that whole thing evolved and fell apart. And then the next big change was his death, so basically he only got 10 years out of his 30-year agreement.

And that was premature, it was not expected, and nobody was really prepared for it. That happened so quickly. So, it was quite a big change and changeover: who ran the ranch, getting rid of the cattle and that stuff.

*Dewey Livingston:* You must have been on the island – would you talk about Henry's death and Dr. Stanton's death and the situations there?

*Lyndal Laughrin:* Well, those were emotional, hard times for me personally because I had quite a close relationship with both those guys, developed over the years. I mean, part of it you have to go back to understand other things we haven't even talked about.

You know, Henry was this very self-made man, very effervescent, camaraderie, you know, liked people, liked to be very independent. And so the hardship of his handicap was hard for him. But fortunately, out here, he was able to work around that.

Basically he was in charge of the operation. He had the ability to get around the island on his own time. And granted, he had trouble using his crutches, but at the same time, he lived upstairs in this bedroom place, and he had to go up and down these stairs constantly. And he worked that out and did that.

You know, the fact is that both of them were heavy drinkers, on the verge of alcoholics basically. But Henry could operate just fine drinking a lot. He would drink at night and get up first thing in the morning.

But then, oh, a couple years before he died, he had a stroke, and then that sort of slowed him down. And then he had a second stroke, and that was really bad. One side was paralyzed, and he just couldn't deal with that. He hated being dependent on other people taking care of him. At that point, then he had to be carried around, and he couldn't use his crutches, and he really couldn't get out and drive around much anymore.

He was at the rehab place in Santa Barbara for a while and just didn't want to deal with it. Basically, he just wanted to give up, go back to the island, end his life. And he was more or less allowed to do that. And he did. He shot himself in the office down there at the ranch. That was not fun. And, we were right there, not too far away.

*Dewey Livingston:* Was Dr. Stanton on the island?

*Lyndal Laughrin:* Yes, he was, and, again, Dr. Stanton, unfortunately, he had this trouble with alcohol, and he kind of tried to battle with it, and so he'd go off of it for a while. And then something would trigger him, and he'd start having problems again. And I think Henry's death triggered off another episode, and that was partly to blame for his own death eventually a year later.

*Dewey Livingston:* Big changes. It must have been quite a shock, quite a precipice.

*Lyndal Laughrin:* Yeah, to have all that happen at once was certainly not something you would have expected and been prepared for.

*Dewey Livingston:* What immediately happened then? Because there was a cattle ranch to run – first of all, did somebody take over from Henry, when he was no longer able to manage?

*Lyndal Laughrin:* Not really, pretty much still had the Mexican cowboys. They could do things. I tried to help out more. Dr. Stanton knew the pattern, so he could sort of muddle through that first year. If he'd stayed alive, and had to keep doing it longer, yeah, they probably would have had to get another foreman eventually.

But I think the way it happened – you know, the shock – he certainly wasn't prepared to replace Henry immediately. And there were certain things you just had to do with the cows, and the cowboys did it, and Stanton sort of went along with what had been done in the past.

And that got you through that year – probably part of the emotion and the tragedy of Henry's death alone, and his drinking – I'm sure part of it was just to avoid dealing with that issue of what to do next. You know? "This is a big change, and I don't want to think about it." Because his interaction with alcohol was very different from Henry's. His was, like, drink and pass out, you're just out of it; you can't function hardly at all.

*Dewey Livingston:* And I take it he wasn't one to talk about himself?

*Lyndal Laughrin:* No, no. Even as I got closer to him in the later years, it was very difficult to have introspective conversations. I mean, a few times I did, and that's sort of how I got this feeling that the whole change of giving up his medicine and doing this out here did kind of affect him, even though he didn't talk about it directly.

But in later years, piecing together what he did and what he would say, that's why he kept his license current and things like that, because it wasn't something he gave up probably wholeheartedly.

*Dewey Livingston:* So, then, a sudden change here. It seems like there was potential for chaos – was anybody prepared to deal –

*Lyndal Laughrin:* No. TNC wasn't thinking they were going to have to take over and run the island. So, there was a bit of scrambling on their part also in terms of, they weren't in the cattle business. They didn't have any staff that knew how to take care of cows.

So, they hired some outside folks and made the decision, for various reasons, as to why they couldn't be in the cattle business and needed to remove them and then start thinking about what they really are going to do out here more seriously.

*Dewey Livingston:* How long did it take for a transition for the main ranch buildings to be adapted to a TNC facility rather than Carey Stanton's ranch?

*Lyndal Laughrin:* Well, during that first year, we were still kind of fooling with the cows a lot. So, there wasn't much else going on. And then they had the first couple, Larry and Nancy Callahan, they were probably pretty influential on helping drive the idea of the changes, even though some of them didn't get implemented 'cause they didn't stay here that long. They left after two or three years.

But Larry had been very good at coming in and developing facilities and programs. He had worked in the resort business – hotel, restaurant kinds of things. And I think the idea was probably obviously always there that they would use Santa Cruz Island as a way to augment fundraising for The Conservancy in general, and, you know, the potential to bring donors out here.

So, that was a separate issue from what they had to do with the property in terms of conservation, the management, you know, feral animals and all that stuff. And that first part was kind of Larry's area of expertise, what would be a vision for how to have the facilities and what you would need and use.

So, there wasn't an awful lot of actual change of stuff right during his tenure. But I think the planning – maybe even fundraising for whatever happened next might have started then. You could probably get better information out of TNC about that.

But yes, there eventually became an upgrade of facilities – bunkhouses that the cowboys had used got upgraded so the staff could use part of that. Part of them got renovated even more to make them even better accommodations for the donor guests that they were cultivating.

And then the big cowboys' dining hall was the major change. And so that got totally renovated, and the roof taken off, and all kinds of things done.

Actually, I should probably try to make a phone call so we could figure out what the boat's doing. Take a little break for a few minutes here.

End of audio file 5; total time 1:25:05

Audio file 6, Monday morning, May 9, 2011:

*Dewey Livingston:* It's still May 9<sup>th</sup>, and we're continuing and probably finishing up with Dr. Lyndal Laughrin.

So, we had been going over the ranch and the activities on the island, and one last one that I wanted to get at least some brief observations about would be the Navy base and the Navy presence on the island, perhaps how you interacted with them.

*Lyndal Laughrin:* I was not really involved on the island before the Navy was here, so I don't really have a good idea of the actual date when they first started. I'm sure that can be figured out some way.

But my stories were that originally there was quite the whole complement of enlisted personnel up there, maybe even officers stationed out here. At the time I came out here, I wasn't really paying a lot of attention to who was actually working up there a whole lot, but it was probably a mixed crew of civilians and Navy personnel.

The program here was basically an intermediate point between San Nicolas Island and Point Mugu as part of the Pacific Missile Test Range. San Nicolas Island was where they would launch – do all the tracking, radar stuff.

And in those days — it was before satellite technology, so virtually line-of-sight communication was needed with microwave radio equipment, that would be the way to do the communication.

And so, there's too much curvature of the earth between Mugu and San Nicolas to make that effective. So, they had this intermediate point here. And so, they had a lot of technician guys that were usually civilians, working for Civil Service or under contract with the Navy, running the equipment.

But then the infrastructure, the kitchen – cooks, guys that served, and mess hall – and the officer-in-charge would be Navy personnel. And then that changed over the years as the Navy downsized numbers of enlisted people.

So, when I was first active and paying attention to things out here, usually it was just a chief that was in charge, and maybe one enlisted guy running the mess hall, and then they had no enlisted people, all just Civil Service. And then later, outside contractors that ran the kitchen, food service.

But anyway, the whole evolution of this thing with Dr. Stanton – probably not the written part of the contract at least – there were a lot of things that the Navy provided services for, for Dr. Stanton and the ranch, including access to the boats that brought the people back and forth.

In the early days, the Navy ran a normal working crew, Monday to Friday, and then they would have what they would call the standby crew usually Friday to Tuesday. So, they would send boats out on Mondays, Tuesdays, and Fridays to transfer these guys back and forth for their working schedule. And these would be the same boats that they used normally for running around and picking up missiles that they were firing and testing, and which would fall in the ocean, and these types of boats would be running all over the place out there retrieving them.

And so, there were two or three hull configurations. They had two boats that were the typical small Coast Guard cutter style. Then in the early days, they actually still had an old wooden-hull PT boat that I actually got to ride on a couple of times. That was pretty exciting because it was very noisy, very fast, much more open than the other boats. The other boats, the configuration would have some good deck space, cargo on it, and a big enclosed cabin where all the people could ride.

And so, when the University started out here, part of this deal Stanton worked out, us being his guests and under his umbrella so to speak, was to allow up to about 18 people – you know, we could have up to 18 spaces on the boat coming and going.

And sometimes we could have more, but we usually had to ask ahead of time and make sure they didn't have too many people taking up their space that they needed. And that was provided free of charge. So, that was a very nice asset and probably one reason why we were able to facilitate this program out here so easily, because we didn't have all the expense of travel back and forth.

And over the years that gradually changed as they downsized personnel. First, they dropped the Tuesday boat, so it's just a Monday and Friday boat. And then they also offered support with their landing crafts, the big boats that would come up on the beach, and the door would drop down so you could drive on and off.

Those were a fairly good size, and you could bring multiple numbers of vehicles back and forth. That's how the propane trucks would come back and forth, the trucks that brought the gasoline, any of the big equipment and supplies would come on those boats.

*Dewey Livingston:* Would they land anywhere else than Prisoners' Harbor?

*Lyndal Laughrin:* No, just right at Prisoners' Harbor. There was a special little notch in the beach there, where you could drive on and off the beach onto the boat deck. And then the pier – another part of the deal was the Navy maintained and supported the pier (at Prisoners' Harbor) that we used for the passengers and daily coming and goings on the regular boats. So, it was, again, a nice addition to having the Navy out here.

And so, other than that, they were pretty unobtrusive. Most of the people that came out there weren't that interested in cruising around the island. They stayed up there. You know, they had the full

television, a pool table. They'd come down to the pier and go fishing. So, they weren't really running around the island very much at all.

Once in a while you'd get somebody that was interested (in the island). And sometimes – because they had guys that had to take care of all their generators and their engines – one of those guys would come down and help when there were problems with equipment down here at the ranch. So, there was always a pretty good relationship between the Navy program and the ranch.

*Dewey Livingston:* How could you communicate with them?

*Lyndal Laughrin:* Well in those days, to the mainland they had a microwave from the island Navy base into Point Mugu. And then the Navy had a hard line that ran all the way from the Navy base down here to the ranch. So, Dr. Stanton had his phone system (thru the Navy system), this was kind of the later iteration. Previously it had been more of an old radio style phone, where you got a signal up to the mountain here behind and south of the ranch, and then across to the mainland, either down to L.A. – kind of the old marine radio technology.

*Dewey Livingston:* Was that the black lines I saw coming up –

*Lyndal Laughrin:* Black cable you see along the fence. Several miles of that cable ran all the way up to the Navy site, and then it would hook into their microwave.

*Dewey Livingston:* Did you socialize with the crew up there?

*Lyndal Laughrin:* Off and on, yeah. I mean, we weren't regularly hanging out up there, or with them down here, but you'd ride the boat with them and, you know, as with a group of people, certain ones would become more friendly and interactive, and others wouldn't.

*Dewey Livingston:* It was no problem with going up there and saying, "Hey," or them coming down?

*Lyndal Laughrin:* No, if you're out in that part of the island and you got a problem, you could always stop in. Henry would go up there all the time. If you were with Henry, you could go in and you'd get invited to stay for lunch or whatever. There were certain buildings that seemed to be fairly restricted with access, but there was never like, "Hey, this is top secret. You can't come in here without security clearance to the base itself." And certainly the dining hall and common area was always open.

*Dewey Livingston:* And then is it still manned?

*Lyndal Laughrin:* Yes, and it's still manned. Now they only have one guy there at a time. They have two guys that rotate. So, one person is always there. And they're more or less just making sure the equipment doesn't have problems, working on the vehicles, basically maintenance stuff. All the technical equipment now is remote accessed, a computer controlled kind of thing.

So, if they have a major problem or need to do something out of the ordinary, then they'll have some extra guys come out. But, the Navy no longer supports boat operations coming here. They quit taking care of the pier. That was one of the incentives to give that little piece of the beach to the Park Service and include that when they transferred that part of the property. So, now the park has taken over the pier responsibilities.

I'm sure communications between Pt. Mugu and San Nicolas Island are different now. That whole program is now under another operation, I think, through China Lake facility, another part of the Navy. But they still maintain equipment at Santa Cruz Island. They don't usually tell you much about what they're actually doing, but there's a big radar instrument up there.

*Dewey Livingston:* I've also heard about a couple of other entities up there, David Taylor Research and MariPro. Do you have any insight on those operations?

*Lyndal Laughrin:* Those were basically the end of the evolution of another program out here, basically a defense contractor operation. It actually started up, I think, in the '60s sometime. Over in Goleta, General Motors had a big operation there, part of their program under Delco Electronics.

And so, one subset of their program over there involved this underwater recording technology, and off the backside, the south, southeastern section of Santa Cruz Island, there's a very large depressed hole in the continental shelf there, goes down to quite low depths.

And they had an array of recording instruments out there, a big grid network. And then they had an onshore facility, where all the cables and things would come here, and a little lab setup and housing for people.

And what they were doing would be recording ship sounds, sort of the "*Hunt for Red October*" movie thing, where submarines and surface ships, as they move through the water at different speeds, because of their hull configurations and their motor sounds and noises, you end up with basically a unique fingerprint, so to speak, of that boat.

And with this array of instrumentation, they could bring ships out here and run them back and forth, different speeds, turning and configurations, that kind of thing, record all this stuff and end up with a sound profile that would be unique to that vessel. And then putting that in their data bank, they can use that all around the world with sensors of different types to keep track of who's who, where they are.

So, submarines would come out here. You'd go down and come in for lunch, or a cup of coffee, and on the wall would be all these pictures of different boats, with their crew, and the captains usually signed it after they'd been out here and done their test. And they actually used it for other countries, too. You'd see sometimes ships from other navies out there.

One pretty impressive time was when they recommissioned the *New Jersey*, the big battleship. I think they were sending it over – oh, I can't remember, it was after Vietnam. It was something they were going to do, but anyway, it came out here, and they ran it up and down the coastline across this thing, and we sat on the hillside with our spotting scopes and watched it move around. That was interesting.

And so what happened was the names you mentioned, David Taylor and MariPro, the Delco program decided that they didn't want to continue that themselves, and so a group of the people involved that worked for Delco left the company, formed their own company called MariPro, and started this second operation and assumed all the equipment and facilities here, kept doing the same kinds of things.

And the David Taylor Research program, I think, is part of the Navy. That was kind of the Navy side of the contracting operation. It was a program, I think, up in Seattle area that was involved here.

And there were some other things that happened out here, too. Stealth boat technology – they did some testing because at one time they had this big, enclosed hangar/floating thing out there, and you knew something was happening, but you could never see what it was 'cause they would do it at night, and when they were doing testing, they didn't want people down there watching things.

Finally, when the program was over, the thing came out of this undercover thing, and you could see it was one of these very angular, black – if you've ever seen pictures of the stealth bombers, it had that same kind of configuration on a boat, and they were testing different ways to reduce its detectability, probably.

Once in a while, they'd have a secret program out there. A lot of time, their people came and went on the airplane with our charter service, Channel Islands Aviation. And sometimes you'd be sharing space on the plane with them, but whenever certain guys would ride on the plane, you weren't allowed on. No one was allowed to ride on the same airplane, and you'd see these guys get off, and their briefcases would be handcuffed to their wrist. [*Chuckle*]

*Dewey Livingston:* Wouldn't have much in the way of conversation with them about business?

*Lyndal Laughrin:* No, they were hello, goodbye, and nothing much in between.

*Dewey Livingston:* And I recall when I was here ten or so years ago, they were revegetating the area –

*Lyndal Laughrin:* Right, I think a big influence with that change was, the Santa Barbara Channel between the islands and the mainland has always been a fairly major ship channel, because it obviously saves time and fuel and costs traveling up and down the coast of California.

But more and more, these very large, particularly the oil tankers are travelling through there, and, of course, the Santa Barbara region has had a long history and controversy related to oil, with the oil spill and the oil platforms developed in the channel. And so, people were very concerned that one of these big ships was going to have a problem, and either dump all of its load or crash an oil platform.

And so, somehow they worked it out that basically those big ships had to go on the outer side of the islands, sort of between here and San Nicolas Island. So, that increased ship traffic near this underwater detection array, kind of started compromising the quality of that program.

Apparently they made the decision that they needed to shut this down, redeploy the thing and set it up somewhere else. And I think it either went up off Alaska somewhere, or off Hawaii somewhere. So as a result of that, they closed this program.

And part of the agreement – at this time, it happened after Dr. Stanton died – with The Nature Conservancy is that they had to dismantle and basically put the place back into the natural situation. So, there was some mitigation about getting rid of leftover stuff and removing all the buildings.

*Dewey Livingston:* We've talked a lot of specifics about Santa Cruz Island and the field station and the ranch, et cetera, and so I just had a few more things to bring this to a close.

And one is, what is your view of the current and future crop of young scientists and researchers that you're seeing come through? I think you're into your third generation of folks coming through.

*Lyndal Laughrin:* That's true. I have seen that, and as professors have evolved, and their students have taken up the torch and continued on, it has been an interesting observation and transition. So, I'm pretty optimistic and positive that there's a lot of new, young blood, a lot of interest in the whole idea of conservation biology. That whole discipline sort of evolved in the time frame that I've been involved out here.

And certainly this island, with its situation of transitioning from a cattle ranch to a preservation entity with the Park Service and The Nature Conservancy, and the whole understanding of those impacts and modification and what we should do next.

So, it's been a prime example of a perfect laboratory for work in that whole area of restoration and conservation. So, I've seen a lot of people that have started their careers here, and transitioned into becoming professors. They move around the country to different universities and colleges. Sort of like planting seeds and then they grow their own programs there. I think that's great potential for the future.

*Dewey Livingston:* No shortage of enthusiasm –

*Lyndal Laughrin:* No, shortage of enthusiasm enrolling people to step forward and be involved – and at the same time, a lot of opportunities to bring out the lay public into it through education and volunteer efforts – ‘cause a lot of these programs need manpower. You don’t need to be an academic person to be involved.

So, you might have the academic or the professional career people in those programs leading and designing programs and taking charge of the situations. But the opportunity – somebody is a volunteer, or part of docent program, something like that, so there’s lots of opportunities to work through the Reserve, with the Park Service, or TNC.

Because, ultimately you do need broader involvement of the greater part of the public to keep these things viable and supported. We all know that in this day of economic constraints that more vocal advocates for whatever, are the ones that get the resources. So, the more people you convert, or get them to fall in love with these places, the more support you’ll end up with.

*Dewey Livingston:* And would you share your views and concerns about air and ocean pollution, climate change – what might be the more modern-day threats to the island?

*Lyndal Laughrin:* I think a big change is just more public access now. How controlled that is, that’s still to be decided. Some of these islands don’t have much visitation, and whether they need it or not, they could probably accommodate more than they have. Well, that will be a change. Whether it’s a threat or not, I think it can be managed so you avoid it being a threat if you want to.

Air quality – we’re sitting in a pretty good place most of the time. The biggest impact is the air from the Los Angeles basin and the Santa Ana winds, blowing that kind of stuff out here sometimes persists long enough, we do notice.

Pollution coming through the ocean, that’s probably not usually a factor out here, this far away, unless you had some major catastrophic, very large-scale thing that went on. I think that The Nature Conservancy and the Park and everyone else are aware enough that there’s not going to be that kind of development that’s going to ever have those kind of impacts, to be really potential to the point of threatening.

*Dewey Livingston:* When I’m on the mainland beaches, I see – and it’s been noted for a long time – an awful lot of trash type pollution washing up on the beaches. I can’t say that I’ve noticed it here, not that I’ve been very far. Do you have a problem with that?

*Lyndal Laughrin:* Well, you definitely find stuff washed up on the beaches. And there are certain beaches that, because of their configuration and direction where they’re facing into the certain persistent currents, that is at the down end of the current patterns, they will be the ones where you’ll find more stuff.

My wife actually has a very interesting little collection she's done over the years. It's basically called "Plastic Crap From the Beach," with a face on it. She's always picking up stuff from the beach, and some of it just gets thrown away because it doesn't fit the criteria to be collectible. But it's amazing how many kid's toys you end up finding on the beaches. You know, volume wise, it's probably not like some of the mainland beaches. So, the source is probably more likely to be stuff that just falls off of boats randomly rather than big piles of things that are flushed off the mainland.

You do find an annoying amount of these helium-filled balloons, Mother's Day, Happy Birthday, Valentine's Day sort of things. Those are really obnoxious. They land in the ocean, and certain animals think they're edible, and bring them in and it stops up their digestive tract. They find them washed up on the beach a lot. But you also find them up on the hillsides because they float in and settle eventually.

Obviously, whenever you have a boat wreck somewhere in Hawaii or where ever, you'll find kind of a little spike of junk that comes in from that. But yeah, by and large, there's a low level of things you'll find persistently on some beaches. But other beaches have nothing at all basically.

*Dewey Livingston:* Yeah, Willows was entirely clean.

*Lyndal Laughrin:* Right.

*Dewey Livingston:* It's what inspired that question.

*Lyndal Laughrin:* I would say there's a couple of beaches – China Harbor, Prisoners', Christy – that, you know, they have these annual beach clean-up days on the mainland. And we've actually had crews that come up out here during that time frame. Christy beach sits wide open, directly exposed to the western end and the currents that come down from the coast of California. So, that one tends to have a constant input of small amounts of trash.

But it is nice to have the perspective and the luxury of, if you only pick up a few things all the time, you mostly have a beach that looks like it has pretty much nothing on it. So we do make a point.

And the same thing with our road systems out here, if you do see something that's blown out of the jeep, you know, you immediately stop and pick it up. Whereas on the mainland, you're – why bother? There's another piece five feet away, and another this and that, and it'll be there again tomorrow.

But here, make that little bit of effort, you know, the viewscape lasts for a long time without anything in it because there's not that much constant reintroduction of things.

*Dewey Livingston:* And then how about climate change. Are you and your scientists –

*Lyndal Laughrin:* Well, it's definitely a new hot topic. You know, try to get money, tie it to climate change and more likely – it's definitely the way things are right at the moment.

So, people are interested in it. We've got projects going on that probably will be able to look at that and say something about it as and when it happens. One project in particular has to do with moisture relationships with the coastal maritime influence, particularly fog and the pines here. Because they are very dependent on summer fog, and if that pattern changes, it could have a big effect on their distribution.

We've got some projects that go way back in time trying to look at bigger pictures of climate change involving Native Americans and others involving fire history. So, that awareness is here, and there's more and more interest. I'm assuming there will be more projects that have that kind of thing tied to them.

The variability year to year, seasonally, in this part of California is almost to the point of, what can you say is normal? It's like the clichés are, "If you don't like the climate in this area, wait five minutes, or go around the corner and it'll be different," kind of thing.

So, you have to be able to tease those little variations out of the bigger picture if we are having a major shift in climate. And so, that's going to take some time.

*Dewey Livingston:* Do you have a place or two on the island that you consider notable or special, that would be worth mentioning – and why you think it's such a unique place?

*Lyndal Laughrin:* That's a hard question. You know, you're not asking that version of the question that most people do ask me, "What's your favorite place on the island?"

*Dewey Livingston:* I was avoiding that word.

*Lyndal Laughrin:* Yeah, right, but I think that part of my perspective, it's hard to answer that question because it's one of the reasons I like this island particularly a lot is the extreme amount of diversity in such a small area.

You know, we have the pine forest. You can go feel like you're up in the Sierra Nevada or Colorado. You have the south side of the island, and you can hop over there and feel like you're in Baja, California.

You're here in the valley, and so – and those changes of space, temporally with how it feels in the spring versus the summer, or it will be cold and foggy versus hot. You're kind of in a little microclimatic or micro continental climate regime here in the valley. You don't even know you're on an island.

And it gets very cold here in the wintertime, freezing temperatures. Very hot in the summer, whereas you go around the coastal area, the

ocean moderates the temperature and you notice that effect. So, it is hard to say any place is better or more favorite than another.

Because you live here in the valley, and so you're here so much, you do like going and spending time up in the pine forest, like up in Saucers Canyon, where you get the pines and the ocean.

I grew up in Salinas, and we weren't right on the coast, but we certainly had easy access to Monterey Bay and Pacific Grove, Big Sur coast. So, I'm particularly partial to that whole land/sea interface, any place along the coastline.

And you get a lot of variation here from the north side, with extreme, abrupt, rocky cliff topography interaction with the ocean and caves. You get the big, broad, white sandy beaches out in the southwest part. So, any place could be your favorite place at any point in time.  
[Chuckle]

*Dewey Livingston:* Well, then, what is your hope for the future of the island? It seems to be recovering, there's a lot of good things happening here. What do you want to see continue?

*Lyndal Laughrin:* Well, I think we're on a good path. So, continuing on the vision that we have at the moment. You know, we have this nice, complementary, compatible program relationship with the Park Service, The Nature Conservancy, and the University. So, I would like to see that continue certainly.

In terms of managing the island, working on the exotic plants, I can see that someday there will be a fairly different view of the island, just from the landscape. I don't really see anything that I feel is negative that needs to be changed and stopped or –

*Dewey Livingston:* You've seen a lot of progress, really, in the last, say, almost 20 years. And that's a fairly short time in the evolution of –

*Lyndal Laughrin:* Right.

*Dewey Livingston:* – I guess we would say this is a big time of change on this island, this first 20 years and going on. So, it feels like it's in its infancy?

*Lyndal Laughrin:* That could be possibly true. You know, the saying, "The more things change, the more they stay the same," could have some application here, too, though. I mean, the island itself and, obviously the geology, and in the broader sense, even the vegetation – none of that changes rapidly.

Most of all, these ephemeral, short-term changes relate to human impacts. And so, we have the Native Americans, and how did they change things. And now, how are we changing things? And what changes will we influence in the future?

I don't know if it's driven by economics. You know, it seems like the Park Service and The Nature Conservancy are in here for the long run,

but “never say never”. If things change drastically in our society/culture, there could be fewer resources, and things might even change there. It’s kind of hard to perceive or generate an idea of what might happen.

But I don’t foresee a Catalina result here. I don’t think that things will ever go that far with that number of people coming and going. I don’t know how much such plans are called for in the future – for somewhere like Scorpion – you know, there have been comments that people would like to see sort of a housing/hotel kind of access to the way one can stay on these islands – somewhere. I suppose something like that would be the next degree of magnitude of change. But that doesn’t seem like it has a big likelihood, but if anything’s going to change, that’s the most potential one.

I mean, another big change that’s certainly highly potential, that would make the island look very different for a short period of time would be if we had a catastrophic fire out here.

But at the same time, this is a vegetation and habitat and landscape that has evolved with fire. We just burned the foothills of Santa Barbara and Goleta in the last several years, and you go out there right now and you see things are recovering. It’s not like it’s going to be a long-term, total change.

So, I don’t know. I guess I don’t really have a vision at the moment that the University’s operations would enlarge drastically, or TNC’s in terms of bigger infrastructure, more programs going on.

And I think where we are right now is a fairly good place to be in, and kind of the ballpark to keep it in.

*Dewey Livingston:* Yeah, I would say it’s a great place to be in.

*Lyndal Laughrin:* [*Chuckle*] Well, I’ve always felt privileged and fortunate to be able to live here, work here, and get paid for it; to be able to be involved and stimulated by the programs we’ve had over the years.

*Dewey Livingston:* Well, should we call that *it*?

*Lyndal Laughrin:* That’s probably a good place at the moment. I mean, I’m sure we can fill in some things in a future time, or whatever we need to do.

*Dewey Livingston:* All right, well, thank you. So this, at the moment, will be – we think – the end of the interview.

*Lyndal Laughrin:* [*Chuckle*] Okay, thank you for the effort you’ve gone through in getting me to sit down and do this.

*Dewey Livingston:* All right, I’ll turn it off, and thank you, too.

End of audio file 6; total time 00:38:02

End of interviews