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WOODS HOLE OCEANOGRAPHIC INSTITUTION

ORAL HISTORY OF JOHN FARRINGTON

Interview by Frank Taylor, May 23, 2005

Tape 5 of 8 tapes transcribed by Arel Lucas, November 2005

TAYLOR: . . . 4, 5. [Tape stops and starts again.] We are at the Clark Laboratory at the Woods Hole Oceanographic Institution for our third session with Dr. John Farrington on his history as an oceanographer, an administrator and an educator here at the Institution. John, earlier we had talked about your early years, and we had talked about your research career, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . addressed a lot of the issues that your name is associated with—oh, just for example, the mussel watch, things like . . .

FARRINGTON: Right.

TAYLOR: . . . this. And thinking about some of the motivation that got you into the pollution side, if . . .

FARRINGTON: Right.

TAYLOR: . . . I would say, of chemistry, since there were a lot of different ways you could go. You also had some experience, however, as a college professor, and some things I'd like to clear up in my own mind. First of all, the first one that I ran into, you were an adjunct research professor at the University of New Orleans at one point . . .

FARRINGTON: Um-hum.

TAYLOR: . . . during your career. How did that come about, and what were you going to do there?

FARRINGTON: Well, that came about because of the interactions that I had with John Lassiter, who was a professor at the University of New Orleans, and his group, and they were dealing with questions associated with pollutants in the Gulf of Mexico? And I had become associated with him at that time just to talk about various aspects of analytical chemistry, and he'd gotten involved a little bit in the mussel watch program, as well. And then they had a huge oil-well blowout, not they, but there was a huge oil-well blowout on the Mexican side of the Gulf of Mexico, in the Bay of Campeche, and Lassiter's group was getting involved in that. And I had gone on a research cruise for NOAA, actually funded by the Office of Naval Research, though, because I had been funded by ONR at that time, to that cruise. And then Lassiter's group was analyzing several of the samples, and so I'd go back and forth to the university there, probably about uh every three or four months, and spend two or three days there, but it was mainly for research, although we had graduate students in the group.

TAYLOR: OK, it's a very interesting area. Gulf of Mexico has all kinds of issues—so-called “dead” spots, things like this. I guess—and again, correct me if I'm wrong—I guess the flushing action is not terrific in there?

FARRINGTON: Um-hum.

TAYLOR: So that that comes in stays for long periods? And this connection came about through a little bit of a contact through the mussel watch originally. Is that fairly common in your area that people get involved in different kinds of things together, and that leads to other avenues of research?

FARRINGTON: Oh, yes, yeah, this is a typical situation where you'll interact with somebody for some reason, and then you'll get talking with them about other aspects, and then opportunities come along, and . . . and you . . . you can see your way clear to continue collaborations, and it would be beneficial to both groups. That's a, in my experience, anyway, a very typical thing that happens.

TAYLOR: Is that fairly unique to oceanography? I look at some of the Dow Chemical laboratories and things like that, and there's 500 people and so forth. And yet it seems to me that there's an awful lot more collaboration and intermixing, if you will, in the oceanographic community.

FARRINGTON: It's difficult for me to tell, because I haven't been in another community per se in the same way, but my impression is that that's typical of academic communities, although in oceanography, because it's a much smaller group of people, totally, in terms of both in the United States and worldwide, and because people go on cruises together, uh and you get, you know, you get put into a pretty intensive environment, living on a ship, that sort of thing. That tends to promote thinking more about collaborative issues, although there [laughingly] have been instances where people have spent time at sea together and decided they're never going to collaborate again. [They laugh.]

TAYLOR: Well, it struck me as one of the things that is unique about a place like the Woods Hole Oceanographic Institution. I took last Friday a group of North Tennessee State undergraduate biology students and their professors around the Institution, and one of the things that really impressed them is talking to a biologist that he also knew something about geology. He also knew something about chemistry. I mean they had this idea: well, gee, this guy's looking at this whole environment kind of thing. And that would seem to me to build that kind of collegiality and intermixing that you're talking about here.

FARRINGTON: Well, I think it does in some respects. I mean, it's pretty clear that, for some aspects of their research, if you're a chemist, such as I was, you needed to know something about the organisms that were interacting with the chemicals, and you can't look at chemicals in the environment without thinking about the sediments that are there and the particulate matter in the water column, and if it's in the water column, then the particles are moving, and that's physical oceanography, and so you have to understand aspects of that. Some people are . . . are more inclined to be doing research that is, if I could use the term "holistic," with respect to looking at the oceans. But you still have to be an expert in something that you bring to the table. And various people do that in a number of different ways. They probably start off mostly interacting between two disciplines—let's say biology and chemistry, or physical oceanography and chemical oceanography, or perhaps biology and sedimentology. If you're thinking about animals that live in the mud, then there's an obvious interaction there. And so the questions of research drive this interdisciplinary or multidisciplinary study.

TAYLOR: Well, it's interesting: one of the students asked this biologist what question he was trying to answer, and as I listened to all this, it really occurred to me that oceanography is really more about a continually expanding question than a specific project, so to speak—that that was kind of the difference between a straight biologist and an oceanographer.

FARRINGTON: Well, all scientists are ultimately, in some way or other, either trying to figure out how nature works—whether it's at the subatomic level or the level of molecules, or in biological systems, or in the physical environment. And they're either doing that or they're to figure out how to use the knowledge that we have in order to better the living conditions of people—quality of life, and it's done in a number of different ways, and oceanography is no different than that. It seems a lot more exciting to some people because they associate excitement with . . . and pleasure with being on the seashore or going to sea, except for hurricanes or things like that. And then there's a certain adventure to being able to talk about: well, you know, when we were at sea off of such-and-such a place, so there's a travel element associated with that, and . . . and, you know, the waves were 15 feet high and the ship was rolling. And so there are a lot of sea stories that go along with the science that makes it exciting for some people, and for others what are looking at it. What they don't often see, and they don't often understand, when you have visiting groups like your group you were talking about, is that there are periods of months and months and months of working, you know, day after day after day, trying to figure out what's going on, very much like any other science. And sometimes, you know, whole months of work just have to be swept away because you find out, look, there's a mistake there, and you have to start all over again.

TAYLOR: Yeah. When you're in a place like the University of New Orleans, do you live there during that period of time?

FARRINGTON: No, I didn't live there. I was there . . . . You know, I would live in a nearby motel, and I would uh, you know, spend, you know, days and nights and evenings in the lab and, you know, very intensive work. I didn't like being away from my family, so you try to get the maximum amount done, and you come back.

TAYLOR: Is that a real problem for oceanographers, this need to be away from family for periods of time?

FARRINGTON: Oh, yes, but I don't think it's . . . uh, you know, it's something that we all recognize, and it certainly isn't as difficult as people, for example, in the armed forces face. I mean, for the scientists, anyway. For the crew on the ship, it's very similar to being in the Navy, in terms of the time away, and that sort of thing. But that's all part of uh the science.

TAYLOR: So when you're in a place like New Orleans, do you really get much of a chance to experience New Orleans in the way someone who's visiting it, let's say, as a tourist would, or something like that?

FARRINGTON: Well, Lassiter and his group, I mean they took me to a number of the different New Orleans, you know, New Orleans restaurants and so forth, so I got an inside look at some of the . . . some of the New Orleans things, and . . . and I remember particularly one time going down there—just to give you a sense of this excitement that oceanography has for people, and I was driving in from the airport, and there was this ad on the radio about a National Geographic show that was going to be on that evening. This was right around the time, you know, one of the first National Geographic shows on the vents, discovery of the underwater vents [clears throat] that was announced by E. G. Marshall, you know, in that resonant, deep voice, you know: “This is E. G. Marshall. Join me this evening for the dive to the edge of creation.” I got into the lab, and people say, “Hey,” you know, “are you coming over to our house this evening? Are you going to watch the show?” So here are all of these scientists, people who are used to discoveries and so forth, sitting there, and they're watching the scientists—Howard Sanders from the Institution here, and Bob (Gosh, I forgot his name now, from Scripps. It's) Hessler, from Scripps.

TAYLOR: Bob Hessler, yes.

FARRINGTON: And talking about these new organisms that they had seen and the excitement of discovery, and, you know, it was like just being associated with the oceanographic institution that operates the *Alvin* and all this sort of thing, you know, was a very exciting thing for these people, that I worked here, and for us, you know, we took these sort of thing . . . . We often take these things for granted.

TAYLOR: Yeah, a couple of comments that you might respond on. In doing Bob Hessler's oral history, he really got into kind of what I could call the "wow" factor of seeing . . .

FARRINGTON: Right.

TAYLOR: . . . the . . . . Forget all the science; just the plain "wow" factor . . .

FARRINGTON: Yeah.

TAYLOR: . . . that's involved. And kind of another, what I thought was kind of a cute incident: two years ago I was climbing in Switzerland, and the guide could hardly speak English, but during the course of the day I started to take off my jacket and so forth, and he looked at my tee shirt: "*Alvin! Alvin!*" He knew the *Alvin*, . . .

FARRINGTON: Yeah.

TAYLOR: . . . and so you're absolutely right. There is this kind of earthbound spaceship aura, if you will, dealing with that kind of thing.

FARRINGTON: Correct.

TAYLOR: So it's pretty unique. So when people look at you and say, "Wow! You have all this time in New Orleans and so forth," you're still a working man and [laughs] you do get some, but you don't get what a tourist gets . . .

FARRINGTON: Oh, no!

TAYLOR: . . . when you go to these places.

FARRINGTON: No, no, then you get to things like being stuck on the way back to the airport in a downpour that, you know, flooded the streets because the pumps couldn't pump the water fast enough over the dikes, and missing the flight, so you had to stay, you know, stay at the airport for X number of hours. I mean there are a lot of down sides to this, you know. [They laugh.]

TAYLOR: Yeah, very true. Now another academic position you had was the Michael Walsh Professor at the University of Massachusetts Boston, and you were also director of environmental studies. But first all, how did that opportunity arise for you?

FARRINGTON: Well, uh, this is historical, so I'll be completely candid about it. I was not happy about some of the tenure decisions that the Institution had made—a couple of junior colleagues of mine, and Cindy Lee and Stuart Wakeham, who've been tremendously successful, and they've gone on to other places. And so I thought the time

had come to move elsewhere. That and plus it was the type of research I was doing was becoming very difficult to get the funding. And so I either had to give up aspects of this environmental-quality research or find another location where there was more salary funding available up front, and one of the opportunities that came up was an opportunity to be on the faculty at UMass Boston, and I went there and interviewed, and it wasn't for any particular position, and then they made the offer of this very prestigious position, and it was mainly to be the Michael P. Walsh professor, and it didn't have anything to do with the director of the Environmental Science Program. And so I went up there, and I began teaching, and I continued my research here, and I was still an adjunct scientist here in the Chemistry Department, and then the professor in charge of the program up there uh, as is often the case; I mean politics enters into science too. He had a disagreement with the dean and the other people there, and so he stepped aside, and then I was the only senior professor available, and so I got thrust into the job of being director of the Environmental Science Program, and it was a new program that had been evolving. The first director—the fellow who stepped aside—had started the program and added faculty, and it was a tremendous opportunity. It was much different. It was truly interdisciplinary. We're talking about faculty lines[?] in law, social sciences, economics, physical oceanography, biology, chemistry—all wrapped into one program.

TAYLOR: With the goal of what? What specifically were they aiming for with all this eclectic mix?

FARRINGTON: Well, they were aiming for a different type of graduate program, where people would be educated at the doctorate-degree level, but also some at the Master's-degree level, to take positions in state agencies, in federal agencies, uh mostly to deal with management issues and policy, and some science, and others who would, you know, continue on just like graduate students here in the program, and go into scientific research, but they would be exposed to a wider range of formal learning, in a sense, of all these other disciplines. In some respects, it was a program a little bit ahead of its time, but it was driven by the fact that this uh UMass Boston is an urban university, and at that time everybody knew that Boston Harbor had serious, serious problems with environmental-quality concerns, and they were talking about building a new sewage-treatment plant, and what was going to happen to Massachusetts Bay and the Gulf of

Maine as a result of that, so there were . . . there were very interesting practical problems for the students to work on as well, as part of their thesis research.

TAYLOR: It sounds like you're right on 100 percent when you say it's ahead of its time, because this really is looking at a whole area and hitting it from every single angle possible.

FARRINGTON: Right.

TAYLOR: Not just scientists, but people who want to understand enough science so that they can make reasonable decisions based on a departmental kind of thing or an environmental sort of thing, or something like that.

FARRINGTON: Well, they . . . . If I could correct that just a little bit. They weren't being education to necessarily be the [thumps] decision makers, although some of them did get into those [thumps] positions. What they were being educated to be involved with is to bring different perspectives, and to understand those perspectives of the different stakeholders, you know, as it's often said "come to the table." Everybody comes to the table, and then out of that comes advice and input for decision making.

TAYLOR: OK. Brings up a couple of interesting points that I'd like you to respond to: (1) all scientists at one time or another run into some kind of funding problem that seems to cause them to look in other directions, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . things like that. Is that something that you thought of beforehand? I mean had you made any prior decisions or anything like that in your own mind: "Well, if this doesn't come through I can move in this direction, or I can move in this direction"?

FARRINGTON: Well, no, I think it was just uh if I could use the term, the John Farrington "mid-career crisis" [They laugh.] in the sense of I'd been doing something the same way for a long time. It was connected in some measure to funding. It was connected to, you know, philosophical disagreements—a number of different things like that. The funding situation was interesting. I found myself writing more and more grants for less and less money. I could get the money, but it was, you know, 10,000 here, 15, 20, 50,000 there, and, you know, this was 1980, so it wasn't like . . . in the 1980s, so it wasn't like that same amount of money today. I mean it was still worth having. The problem was that then you got into a situation which is common to some of the scientists

here today, and that is that you're always writing a progress report or the next grant, and you don't have time to really sit down and think and synthesize the information. As I said, it was pretty clear to me that I could continue to get reasonable funding for fundamental organic-geochemistry research in the ocean at that time. I'd have to downsize my lab, and that wasn't a problem in terms of the actual research, but it was a problem in terms of the loyalty I felt to the people who were working for me. And so you . . . you have this feeling that these people who worked with you for . . . some of them for 10 years, 15 years, and you want to keep funding coming in. They're depending on you, their job, and so you get into this cycle of writing proposals and then writing progress reports, and I remember one time where there was a . . . There were like three different national meetings being held, all in different places and by different funding agencies, and they all (quote-unquote) "demanded" that, because I was a PI, I show up at them, and of course it's impossible to be in three places at once. And . . . and they felt that for, you know, one month of the year of my time that they funded, they (quote-unquote) "owned" my schedule. [They laugh.] And that was what made me begin to think much more seriously about, OK, you know, what are you going to do? Are you going to give up on the environmental-quality research that you're doing? And my answer was I don't want to. And so I'm going to have to start thinking about where can I go in order to pursue that, or how can I do something to pursue that?

TAYLOR: So in many respects, then, your position is really that of a CEO for your own small group, and you're responsible for everything that goes on in that group, including the progress it's going to make scientifically, and as you say, loyalty to your people, keeping them in a job situation?

FARRINGTON: Yeah, I don't think it's . . . Maybe it's my academic background in saying that it's not like a CEO so much as it's like being a member of a sports team. Maybe that's not the analogy that works well either, but, you know, I couldn't have done many of the things I did as a scientist without having those people present, and there were lots of, you know, loyalty issues that I felt I had to deal with. Now, interesting enough, when I decided to go to UMass Boston, of course I couldn't take everybody with me, and I really approached that with some trepidation, but I kept some of the grants here that I had at the Institution, and as . . . as uh luck would have it, and it was very fortunate,

lucky, a couple of the people that I was interacting with decided at that point to make a change in their own career, and they were sitting there wondering, “How’m I going to talk with John and tell him that,” you know, [They laugh.] “we’re moving somewhere else?” And I’m sitting there thinking, “How’m I going to tell them that I’m going to be moving, and they’ve got a couple of years to,” you know, “to phase out and find some other person to interact with here at the Institution.”

TAYLOR: OK, so the decision was made, and it sounds like it’s not an easy decision to make.

FARRINGTON: Oh, heavens, no, no.

TAYLOR: Tell me about your experience at UMass. You’re actively teaching class now. Were they undergraduates or graduates?

FARRINGTON: No, in this case it wasn’t such a big change. It was graduate students. Although I had hoped, if I had stayed there, that we would move in the direction—and I was pushing, a little bit to move in the direction—of undergraduate teaching, and of course they’ve gotten there now, ten years ago, probably about five years after I left. The interesting thing is that you go from Woods Hole Oceanographic Institution, in a small village on Cape Cod, OK, which, no matter what anybody says, there was a quote I liked in a now defunct magazine, *Omni Magazine*, that a person wrote and said, “No matter how much these folks walk around in sandals in the snow in the wintertime, they really live in a major ivory tower, more so than perhaps those that are covered with ivy.” OK. And uh in being at UMass Boston it’s almost, you know, 180 degrees turned around. You’re there at a university [loud metallic sounds] whose purpose is to provide an education, public university, an education for people in an urban setting. Uh many of the people who went there were poor people coming from working-class backgrounds like my own, so I felt some affinity to those, and there were, you know, wonderful instances of symbols of what the university was about. I remember going to a commencement where the grandmother, the daughter and the granddaughter all got their Bachelor’s degree at the same time.

TAYLOR: That is wonderful.

FARRINGTON: OK. And . . . and they just happened to be African-American, but that, you know, it was symbolic of what the University was all about, and I happened to be

there, unfortunately, at a time when they had to cut the budget over a three-year period of time, almost 15 and 20 percent in some places, and I mean I could look out my office and see undergraduate students in tears out, you know, in the quadrangle, because they couldn't get the classes they needed in . . . in four years, and so they had to go five, six years, which was a burden for them and for their family.

TAYLOR: I hear you. My own son ran into the same situation in the University of Massachusetts system, where ultimately it took him five years to get his degree, because he . . .

FARRINGTON: Right.

TAYLOR: . . . he couldn't get the classes in that were needed. This was a pretty big change for you, to go from a place like the Woods Hole Oceanographic . . .

FARRINGTON: Right.

TAYLOR: . . . Institution to a place like UMass Boston that's kind of a commuter college. Did that take some getting used to for you?

FARRINGTON: Well, there were some things that I had to get used to. I mean one of them was that people here many times don't appreciate the various levels of support that we get from other areas of the Institution. For example, it would have been very difficult if I hadn't already kept some grants here . . . . I mean I'll give you one example. I mean, you know, Graphic Services was practically nonexistent, and we take, you know, the Graphic Services Department here in . . . in some measure for granted, when we need them. Nowadays a lot of people do things on computers and so forth, but they run into a glitch, then you got to run up and do things. So that was one. I mean getting grants out of the university system is uh, you know, a tortuous situation in comparison to dealing with grants and contracts here at the Institution, and so the paperwork was significant, but you'd expect that in a large university system. One thing I learned very quickly, though, and that was that it took me as much time and effort to get \$100,000 to support the graduate students in my lab in their research at UMass Boston as it did to get a million dollars here to support the research and ongoing activities that I had. That's just [thumps] said for comparison. And the only difference was that you knew your own salary was covered for nine months, but there were expectations for that, too. You had to serve on faculty committees. You had service to the University. I enjoyed it. I didn't mind that

part, but some people who are focused primarily on scholarship and interacting with graduate students found that to be tedious and a pain in the neck.

TAYLOR: Now, during all this, at any point were you considering from that point on a straight academic career?

FARRINGTON: Oh, yeah. Well, I always [beeping sound from machinery backing up] considered myself, like lots of people do here on the scientific staff, as already being in an academic career. I had been teaching while I was here and advising graduate students, and having undergraduates in my lab, and visiting and guest students, and I always enjoyed that part. And uh and in fact one of the reasons I went to uh to UMass was a I had a feeling that perhaps the education activities of the Institution weren't as valued at that time as they should be. So . . . as I said, there were many reasons, and I can't point to any [laughs] . . . any specific one, and it probably all boils down to, you know, as I said before, John Farrington's mid-career crisis. [They laugh.]

TAYLOR: You know, you could, I think, clear up something, at least in your view. I think a lot of people . . . someone who might listen to this may be some kid doing a research project in high school or something like that, and they're going to see things in blacks and whites. They're going to see an academic career as being someone that stands in front of a classroom and . . .

FARRINGTON: Um-hum.

TAYLOR: . . . does what a teacher does. And on the other hand they'd see a research career as someone who's got test tubes and things like this. But from your standpoint, are the two mutually incompatible, or do they go together?

FARRINGTON: No, I think they . . . they usually, for the vast majority of people, go together, and when you talk about an academic career, you're talking about a career of scholarship, research of various types. It could be fundamental curiosity-driven research. It could be research to solve societal needs. You're talking about education in various ways. It could be one-to-one interactions, or it could be lecturing to, you know, a class of 200 in an auditorium with discussion groups, or it could be advanced classes of 10 or 15 people. It can be advising and mentoring, and then it's service, and by service I mean service to your profession, you know, helping run professional societies—nationwide, internationally—service to the university. Uh it's service to the international community,

service to the nation in advisory capacities. So all of those things enter into an academic career. Now there are different philosophies about that. Many universities and colleges say absolutely your people have to teach, and therefore good scholarship isn't enough. You have to have teaching and . . . and service. Part of the argument that you hear a lot of times is that universities don't honor the teaching and scholarship sufficiently. I mean the teaching and service sufficiently. They are only looking for who's going to publish and who's going to bring in grant money, 'cause that pays overhead and gets all the headlines—that sort of thing. But that's not true, if you look at people who teach at . . . at well established four-year colleges, like Amherst College and other places. Scholarship is important, but teaching is . . . is right up there with it.

[END OF SIDE 1, TAPE 5]

FARRINGTON: . . . their funding with the clear expectation that they will be teaching, and there are certain requirements that come with that funding. Now, it varies from university to university, department to department, and appointment to appointment. At the other end of the spectrum you have organizations like Carnegie Institution in Washington, DC, which are . . . are purely research, although there are people who do have adjunct appointments at different colleges and universities, and they do do research, and they do have students come there to do research, but they're not degree granting, and they don't teach classes.

TAYLOR: OK. Over the years, this program really dealing with ocean studies and things really has expanded at the University of Massachusetts Boston. There was Harbor Explorations. There was the Institute for Teaching and Learning which was primarily for public-school teachers, but focused on oceanographic subjects . . .

FARRINGTON: Correct.

TAYLOR: . . . using the boat and borrow[?] lab and things like that.

FARRINGTON: Yes.

TAYLOR: Was that all in existence when you were there?

FARRINGTON: Well, actually what happened was that they would bring up uh Project Oceanology, in the early stages, which was Connecticut based, and then Jean McCormick, who was the vice-chancellor at the time at UMass Boston and was one of the founders of the Institute of Learning and Teaching, she went out and raised funds, and

they were able to get the Envirolab, although they didn't get it till just about the year I was returning to come back to [thumps] the Institution. And the . . . the focus of that, and it was a very interesting one, was to get the inner-city students [thumps] out into the harbor, and to understand that what was going on in terms of cleaning up the Harbor was for their benefit, that it was their harbor, and that once the harbor was cleaned up that they would be able to use the beaches, and they might be able to go back and do what used to be done in the olden days, which was to go shellfishing [thumps] in the local mud flats. And so the idea was you can take the tea in Boston and go to the beaches, OK, and so you need to understand what's going on in your harbor. And they would bring teachers out to do that, and then they would bring students out to do that, and it was very interesting to watch how the students, the elementary-school and high-school students, would look at that and uh get turned on in some measure.

TAYLOR: Yeah, I know. Just recently I've actually had a mother come up to me. I was wearing a Woods Hole jacket, and she talked about the fact that her dog[?] had been out on this boat of UMass Boston. I said, "Was that the Envirolab?" She said, "That was it." And what a nice experience it was for her. And when I think back in my early days: you're absolutely right. For a nickel I get in the trolley car and go out to Revere Beach, or I could go to Carson Beach, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . a city beach. Where UMass Boston now sits was a disposal dump, . . .

FARRINGTON: Correct.

TAYLOR: . . . and you put tarpaper shacks on it and all . . .

FARRINGTON: Right.

TAYLOR: . . . that kind of thing. So there've been some pretty significant changes in that . . .

FARRINGTON: Right.

TAYLOR: . . . area. I was a student in that program at one point. And it was a great experience. I just enjoyed it thoroughly.

FARRINGTON: Yeah. Now, tragically, and I think it is a tragedy, although there are many tragedies in the world. It's unfortunate—let's put it that way—that that program, as I understand it, has been cut from the University, and so they don't have that operation

any more. Uh but Jean McCormick is now the [thumps] chancellor at UMass Dartmouth, and she is uh pushing hard, along with several people, to get that running, that sort of thing running out of New Bedford Harbor, and bring that sort of experience to the students in New Bedford and Fall River area, which is a good thing, too.

TAYLOR: Well, it's been so far partially successful.

FARRINGTON: Right.

TAYLOR: I mean there are things happening there.

FARRINGTON: Right.

TAYLOR: You sound very enthusiastic about that kind of experience that you had there. What was the deciding factor in your own mind that made you say, "Oh, I'm going to go back to Woods Hole again"? How did that all come about?

FARRINGTON: Well, my colleagues here—or some of them—nominated me for the position of dean that had opened up, and when Craig Dorman came onboard as director, and Charlie Hollister, who had been the dean, moved to be vice president for the corporation and do more fundraising. And there had been a review of the Joint Program at the time, which said that . . . that the Institution really needed a full-time person in the position as associate director for education and dean of graduate studies. At the time that was the position. It's since evolved into vice president for academic programs and dean, and the graduate studies part has dropped off, because it covers all aspects [thumps] of the Institution education. And I always uh enjoyed my colleagues here. That wasn't a question at all, and, as I said, I hadn't actually ever moved my lab completely. I still had a lab here, and a graduate student graduating and getting his doctorate degree in 1990, at the time I was coming back. And so I sort of still had a foot in both areas, and there were things that I had learned at UMass Boston and that I thought could be helpful here. Uh and so [thumps] it was an opportunity to come back, and then I'll have to say I was also frustrated by the continuing budget cuts at the State level, which were hampering the development of the program. Things that we were promised, you know, in the beginning just weren't coming to fruition because there wasn't a sufficient amount of money.

TAYLOR: Yeah, I remember being very impressed one time. My wife, as an undergraduate, went to the University of Illinois at Champaign-Urbana [Urbana-

Champaign], and I was used to an educational situation here in Massachusetts that you had many, many prestigious private . . .

FARRINGTON: Yes.

TAYLOR: . . . universities. And poor UMass. was always the one that just didn't have much money and all that sort of thing, and it was really an eye-opening experience to me to go to a place like the University of Illinois where that was a big university in that state. There weren't that many private . . .

FARRINGTON: Right.

TAYLOR: . . . institutions. And here was every tradition and everything that a Harvard or an MIT or what-have-you did. And I really felt that kind of deeply, because surprisingly enough I did not go to UMass, but that was never my safe school. That was the school that I originally wanted to go to.

FARRINGTON: Um-hum.

TAYLOR: Rather, I ultimately went to BU, but that was a first choice for me.

FARRINGTON: Yeah.

TAYLOR: It was kind of discouraging to see, oh, a lot of the politics and the funding and things like this that got mixed into the State situation there that makes it difficult.

FARRINGTON: Well, it's . . . but that's life. I mean the advantage in Massachusetts and . . . and [thumps] . . . and I finally have . . . . You know, hindsight is wonderful, so I can look back on it now and say, "Well, of course, they were, you know, they were having problems, and they cut, and they did a number of different things." But uh they were still slowly moving forward, and the advantage in Massachusetts is you have this wonderful array of colleges and universities that enriches the whole of the commonwealth and actually enriches all of the educational environments. For example, UMass Boston itself—at one point, if I remember correctly—had as many or . . . or more Harvard PhDs were at UMass Boston (especially in the arts and humanities) than at any other university, college in the nation except Harvard itself. And why was that? Because people didn't want to leave the rich educational environment that they had at those different places. And . . . and so they were looking for an appointment nearby that would help them do that, and so they were at UMass Boston but they maintained their connectivity with their colleagues and their professors and so forth at Harvard, so it was

very enriching, and there were a number of different examples like that, where interactivity . . . . When I was doing research at UMass Boston I had a joint grant with Phil Geshwoon[SP?] at MIT, who had been a student, initially, in the Joint Program in my lab when he first started off. I wasn't his thesis advisor, but we had kept contact. And so there was that type of crossover and interactivity. People would ask many times, you know, "Well, why would UMass Boston have the program like we had?" And I would say, "Well, our mission is primarily to the Commonwealth, first off. And then we also do things worldwide. Whereas MIT's mission is galactic, but they also do work in Boston Harbor." And so it's the also part, you know, that . . . . Where's the prime focus? Where's your principal responsibility? And I think that's . . . that's part of the challenge in Massachusetts is to realize the principal responsibility of the University of Massachusetts system is to Massachusetts, and to provide a first-rate education at relatively low cost for its citizens and for other people to come here. Whereas at Harvard and MIT, and correctly so, they have galactic missions [laughs] in a way. And BU and other places like that.

TAYLOR: That's a wonderful explanation, because it clears up a lot of things in my mind, too. I mean this truly is in a very rich area for someone in your field.

FARRINGTON: Oh, it is. There's no doubt about it. And then, of course, there's all sort of politics when it comes down to, you know, there's a little bit of money available in Massachusetts; who's going to get it? OK, then the fun starts, as they say. And more and more in the United States, though, we're moving from public-supported universities to public-assisted universities to what some people now call public-affiliated [laughingly] because, you know, it's less than 10 percent of the total budget actually comes from the allocations from [thumps] the State legislatures.

TAYLOR: But yet they'll help build a sports stadium for . . . . [They laugh.] Well, I don't want to get into that, but . . . .

FARRINGTON: Well, the alumni build the sports stadium [thumps] in large measure. And part of the argument is you want to keep the alumni happy because every once in a while some of them will uh provide a gift that will, you know, build an arts center or something like that. Uh it's a very complicated . . . . It's a business. You know, when

you get right down to it, and you cut to the core, it's a business. It's part of the social fabric of the nation, like everything else.

TAYLOR: Some of the other things that you've done: aside from your research and your teaching, you've also written for a number of publications, things like that—not only straight, academic kinds of writing, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . but also writings, really, for lack of a better term, for the lay person.

FARRINGTON: Right.

TAYLOR: What brings you into a field? Most people that I know are publishing in their academic interest. I don't see a lot of writing for general readership. How did you happen to get into that, and what was your thinking behind it?

FARRINGTON: I enjoyed it. And . . . and it was just something that I felt was uh interesting to do, and I was encouraged by the fact that when I first came to the Institution my postdoc mentor, Max Blumer, uh and his colleagues, such as John Teal and Howard Sanders—those people that I interacted a lot with did that. And in fact Max told me one time that, you know, we're funded by the public and we need to . . . . We need to inform them from time to time what their, you know, when we have something relevant in our research to talk about. I mean that was part of what we discussed previously, about oil pollution, and so forth, but explaining it to them in ways that would be helpful, also, writing articles that could be easily understood and digested without lots of professional scientific training by people who are aides to congressmen and senators, and congressmen and senators themselves. Uh and so there was . . . . There was support and encouragement by example, to do that. So it means if you're . . . . If . . . if you enjoy that and you do it, and you do a certain amount of it, then that's great. It doesn't mean everybody has to do it, but more and more it's becoming a really important issue that people need to communicate the results in a way that the public can understand it, because there are so many urgent matters, so many important matters that are being brought to the public's attention every day, and how are they and their elected officials and the appointed officials going to figure it out, where to put the, you know, the resources of the nation or the resources of the world, if scientists don't communicate [slap as of hands on clothing] and educate them?

TAYLOR: In terms of the thinking of that—it's a very good explanation—it occurs to me that oceanography really, as a generic term, really started to get kind of a big boost way, way back with the invention of things like the self-contained underwater breathing apparatus. They had television programs like Mike Nelson and his "Sea Hunt."

FARRINGTON: Um-hum.

TAYLOR: Jacques Cousteau . . .

FARRINGTON: Right.

TAYLOR: . . . became . . . . I mean, my heavens, people would sit and listen to this deep French voice say, "See the little puffer fish." We thought, "Wow!" and so on. And I can remember myself at that particular period, being a young guy and into this, and, oh, I could talk about deep scattering layers and things like that . . .

FARRINGTON: Um-hum.

TAYLOR: . . . because of course I'd heard it on TV. But those kinds of things sort of ignited the public, and they got the public interested, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . this writing for the layperson, doing television . . .

FARRINGTON: Right.

TAYLOR: . . . for the layperson and so forth. Sometimes I wonder if we continued that, and if there had been more folks like yourself that communicated what you were doing, so that someone could understand it without having taken advanced calculus or something like that, . . .

FARRINGTON: Right.

TAYLOR: . . . that maybe we wouldn't have had as many funding problems now, because there'd have been such interest?

FARRINGTON: Well, it's an interesting . . . . That's an interesting question, observation. In my view, the interrelationship between research, academic research and education and the general public and funding, and this sort of thing, is . . . is really related to, and has always been related to the question of the quality of life. What are we pursuing? We're trying to understand nature so we can understand it better, so we can live a better life in a number of different ways. Now, quality of life means different things to different people, but generally speaking it means freedom to make some choices

on your own, and, without that freedom, then all of the other stuff disappears, and so what happened while Jacques Cousteau and [thumps] these people on “Sea Hunt” on TV and stuff like that were all uh raising the level of understanding and excitement about exploration, that was also a time when, in order to remain free, our nation was faced with serious—what we viewed at that time, anyway—as very serious issues associated with the competition with the Soviet Union in the Cold War. And evolving out of World War II there were a number of issues like uh, you know, submarine warfare, how to hide our submarines and how to find theirs. And, when you got down to the point where people were talking about nuclear submarines staying underwater with missiles that could be launched with . . . with nuclear warheads, then you’re getting down to the very serious nitty-gritty of . . . of urgency, so you’ve . . . you really have to understand more about the oceans, in all of its manifestations, and you don’t know for sure what part of that understanding is going to be helpful to you in this world competition about [thumps] which [thumps] approach to life and government is going to survive. And so there were a lot of issues as to, you know, in the public domain about, you know, fisheries and feeding people from the ocean, and issues associated [thumps] with exploration and protecting marine life and that sort of thing, but the underlying theme was really connected in large measure with the Cold War at that time. Now the Cold War has gone away, and—to use an argument that . . . that I thought was [thumps] beautifully presented as [laughingly] an analogy [thumps], an example, by Tom Malone, Sr., who was a meteorologist (He used to be foreign secretary of the National Academy of Sciences.), in a meeting discussing environmental education at the Presidio, which was put together by the White House at that time. Somebody asked him about this, and he said, “Look, think about the Cold War as follows: this was a giant tug of war with the United States and a number of its allies lined up one side of the rope, and the Soviet Union and the allies, the Eastern Bloc, and so forth, lined up on the other side, pulling back and forth, back and forth, with this huge uh you know, pit, horrible pit in the middle, if anybody should ever go into it, and all of a sudden in the early 1990s, as with the Cold War, OK, it was like, in a tug of war, the Soviet Union and the Eastern Bloc all of a sudden let go of the rope. Back we go! And it was the United States, the anchor person on that side, you know, you fall on your rear end; you pick yourself up; you dust yourself off, pick up the rope. There’s nobody on the

other side. No game! What do you do? How do you decide what your priorities are? And . . . and . . . that affected science in a major way. It's affected our nation ever since, but it's cascaded over [thumps] into science. What parts do you fund? Now clearly you still fund biomedical research. Why do you fund biomedical research? It's because of the quality-of-life issue. So there's no problem in arguing about the quality of life. It's immediate. Biomedical research addresses human needs immediately. It's much more difficult to get people to pay attention to what might happen to climate in 10,000, 20,000 or 100,000 years. They just don't see it. And they've got other issues they have to deal with: food, uh security in terms of their retirement, medical benefits. I mean we hear all of these things these days in the news. And yet Science is coming to the table and saying, "We need a part of that tax dollar, because these are the wonderful things we're going to do for you." But they're saying, "Well, do you need to do them now, or can you do them next year?" You know, "What happens if you don't do them now?" And that's the difficult question: can you guarantee me the answer that they want? Can you guarantee me there's going to be something really exciting coming out of this particular area of research? And the answer is, "No, you can't." You have to look at the whole ensemble, and so now we're back to well, we should invest some percentage of the gross national product in science, but what percent? Is the past necessarily a guide to the future? These are all very difficult questions that the combination of our scientists and the leadership in different ways of our nation—I don't care whether it's Republican or Democrats or the national people or others, you know. And there are really difficult questions that we haven't been able to answer. But still we need to keep the public informed about what we're doing. That's a base. You have to inform them about what you're doing. And then maybe eventually they will understand it's an urgent matter—that they have to worry about what's happening to the ocean.

TAYLOR: We'll get to this later on, . . .

FARRINGTON: Yeah.

TAYLOR: . . . but just let me interject a personal opinion. When I taught, which was for 36 years, uh I never saw my fundamental job as to produce future biologists, chemists, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . what-have-you. I always thought my basic calling was to develop an informed citizen, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . someone that could have . . .

FARRINGTON: Correct.

TAYLOR: . . . an appreciation for the kinds of things you just discussed, and therefore would either be able to—in some subtle ways—pressure governmental organizations, or at least be able to vote for people who are articulating problems in this particular area, and the person has enough background to be able to see: . . .

FARRINGTON: Yes.

TAYLOR: . . . yeah, you know, that's right.

FARRINGTON: Well, you have to educate uh . . . . You do have to educate the general public. There's no doubt about it, but you also have to continually educate those people who have gone through that public-education system that you describe, who are now in positions of responsibility and leadership—whether or not it's in the executive branches of local government, state government, or the national government; whether or not it's elected people; whether or not it's their staff, because those people are also educators and opinion shapers. And so if you . . . if you uh . . . . Let me give you one example about how this . . . this works. We had . . . . We have a magazine called *Oceanus* from this institution, and uh it's now gone to be Web-based, primarily, but it's always been [thumps] there. It's always been informing people. It's been used by teachers. It's been used by the lay public. I've written articles for [thumps] it. I've testified [thumps] before Congress a number of times, and . . . about oil pollution and things like that, and I've found it very helpful to attach such general articles to my testimony, and I've been told by the staff that they've been helpful in informing them. A couple of years ago we went down to a testimony before one of the Congressional committees, and there were a couple of [thumps] tables in the back of the room, which is often the case in these hearing rooms, where you can put information [thumps] and material that's relevant to the hearing that's being held, and there were some *Oceanus* articles, *Oceanus* volumes there. And one of the staff people happened to come down, one of the Congressional staff people came down and introduced themselves, and it turned out that she had actually

been a summer-student fellow here at one point, and she said, “Oh, that’s interesting (the *Oceanus*) [thumps]. That’s relevant. Oh, the members of the committee should see that.” And she picked up the whole stack and took them up and put one at every place. OK, now you don’t know how many people actually read it, OK. But it was there [thumps] in front of them, and even if they only looked at the titles and the abstracts, at least it caught their attention. And the issue at stake here is that these are members of Congress who people are trying to get their attention on a whole bunch of different issues every single day, and so if you can only do that once out of, you know, all of the days in the year, it’s still worthwhile to have that publication available to them. And . . . and these are the ways that we need to work. We need to work on all fronts. We need to go to what some people will call the influential public. I mean that kind of turns some people off when you talk about that. I don’t like describing it like that. I like to say these are people who either have had a success because they’re in business or they’re leaders because they’ve been elected or appointed by elected officials. If you can reach them as well as provide their constituents, the public, [thumps] with information, then we’re . . . then we’re making the right steps.

TAYLOR: I gave the last . . . the first of the new series of *Oceanus*, “The Deep Ocean and the Shallow Water” . . .

FARRINGTON: Right.

TAYLOR: . . . to . . . I was fortunate to come up with a few sets of both copies to kind of a wide spectrum of teachers and whatnot, and . . . “I can actually get some questions for my final out of this.” I mean there’s some really fine stuff in that.

FARRINGTON: [Thumps.] Oh, yeah. This is a hidden jewel with respect to both education at middle-school/high-school level and also [thumps] uh for general oceanography classes in college.

TAYLOR: And those kids go home and talk to mom and dad, . . .

FARRINGTON: Sure do.

TAYLOR: . . . and other relatives. But you made a statement not too long ago when I asked you if you were ever frustrated by you discovered this based on pollution and whatnot, and the . . .

FARRINGTON: Right.

TAYLOR: . . . government doesn't act on it. You said, "Wait a minute. I can go into an elementary-school classroom and I'll see a poster . . ."

FARRINGTON: Right.

TAYLOR: ". . . that will say 'Don't spill oil' or something like this."

FARRINGTON: Yeah. Don't dump your oil down the drain. [Thumps.]

TAYLOR: Right. And this is the same kind of thing we're talking here.

FARRINGTON: Correct.

TAYLOR: OK, you know, one of the other things you did I'd just like to talk about briefly. You're also a trustee of the Bermuda Biological Station. How did that come about, and what exactly does a trustee do?

FARRINGTON: Well, it came about because of my early introduction to ocean sciences, uh when I was a graduate student at the University of Rhode Island Oceanography School, is that we got on a ship out of Bermuda. And, as was common in those days and even now, we stayed in rooms at the Biological Station prior to getting onto the research vessel, the *Trident*. And so I became interested in the station [thumps], and then uh shortly thereafter uh they began to expand a little [thumps] bit in terms of having some staff there, and in the early '70s Tony Knapp[SP?] went there as a . . . as a scientist, and . . . and he and I had done research on oil pollution in the oceans, and so we collaborated and interacted. And over the years I knew what was going on there, and we had had some joint projects together, some related to international aspects of pollution of the oceans. And I was asked to become a member of the Corporation, which is really people who are interested in supporting the station, you know, and paying dues each year. The Corporation elects trustees. The trustees have responsibility to oversee uh the general aspects of the Biological Station, which is actually a nonprofit incorporated in the State of New York, even though it's located in Bermuda. And those trustees are very much like the trustees of Woods Hole Oceanographic Institution. I mean your primary responsibility is that you hire, appoint a director and senior leadership. You help support the organization in a number of different ways. Some people do that financially. Some do it with advice and work. (That's my case.) I mean, you know, you generally have the four Ws—or 3Ws—if I could use that term, when you become a trustee of a nonprofit: you have work, wealth, and wisdom [thumps]. And you're expected to contribute two

out of the three. Uh in the case of the board in Bermuda [thumps], I added the fourth W many times, saying that you also have to have wit in order to engage [thumps] with the . . . the people. So what we do is help provide advice and guidance in a number of different ways to the senior leadership of the Biological Station.

TAYLOR: Interestingly enough, in thinking about what we were talking about just prior to this, in terms of education, I can remember being very impressed three or four years ago, looking through an elder-hostel catalog and finding out that the Bermuda Biological Station had an . . .

FARRINGTON: Right.

TAYLOR: . . . elder-hostel experience that was about three weeks long.

FARRINGTON: That's right.

TAYLOR: And I thought that was . . . . In view of my particular feeling about educating the public, . . .

FARRINGTON: Um-hum.

TAYLOR: . . . I thought that was a great move. I really did.

FARRINGTON: Oh, it's wonderful. I've been down there for trustee . . . .

[END OF TAPE 5]

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WOODS HOLE OCEANOGRAPHIC INSTITUTION

ORAL HISTORY OF JOHN FARRINGTON

Interview by Frank Taylor, May 23, 2005

Tape 6 of 8 tapes transcribed by Arel Lucas, November 2005

1 TAYLOR: . . . spent about an hour going over your career in academia and talking about  
2 some of the other things you did, and philosophies on why you would publish materials  
3 for lay people and things like that, . . .

4 FARRINGTON: Um-hum.

5 TAYLOR: . . . along with the extremely high need in this field to publish your  
6 disciplinary kinds of things.

7 FARRINGTON: Right, yeah.

8 TAYLOR: And I think you expressed the opinion that this is something that you really  
9 feel science has to do to inform the public as to what exactly it is you're doing. You also,  
10 during that period, talked on how you came to return to the Institution.

11 FARRINGTON: Um-hum.

12 TAYLOR: And you came, now, see if I've got the title correct, as Vice President for  
13 Academic Programs and Dean of Graduate Studies?

14 FARRINGTON: No, originally it was called Associate Director for Education and Dean  
15 of Graduate Studies, and then the feeling was expressed by some trustees and a few of the  
16 associate directors that we had so many directors of different things around here, and  
17 other associate directors, that nobody understood the subtlety of the term "Associate  
18 Director for" rather than the "Associate Director of." And so there was a move afoot to  
19 change the titles to "Vice President," and when they did that there was a discussion of the  
20 role of the dean, and it wasn't just "Dean of graduate studies, it was responsibility for all  
21 education programs, so I argued that [thumps] simplify the title and just call it "Dean,"  
22 and that'll be the end of it. Which is interesting, because we had a "dean" of graduate  
23 studies, but we had an "associate dean." It was "Associate Dean of Graduate Studies," it  
24 was "Associate Dean." So, you know, it was very [thumps] . . . . The titles were  
25 confusing, and . . . and sort of had been driven by previous needs at the Institution, but  
26 weren't really reflecting what was going on now.

27 TAYLOR: Well, . . .

28 VOICE: I just have to fix his microphone for a second.

29 FARRINGTON: Yeah. [Tape stops and starts again.]

30 TAYLOR: It's interesting, and it seems reasonable that it should have reached the point  
31 where you have to debate a title on this, because this has been an evolutionary process

32 over the last 20-30 years. When the Joint Program started, it's my understanding that it  
33 was controversial, that there were varying opinions on whether we should have a program  
34 of this sort. And I can remember once Dr. Arnold Arons telling me that he really felt he  
35 became a trustee because they knew he'd argue in favor of a program like . . .

36 FARRINGTON: Right.

37 TAYLOR: . . . the Joint Program, and he talked at great length about that. And yet from  
38 earliest times, all the way back to "Iceberg" Smith, there had been some education going  
39 on here at the Institution, and people like Buck Ketchum, Mary Sears went on, I think  
40 finished up PhDs, here at the Institution, even before the Program ever started. Then we  
41 went through a series of deans, and the Program started to grow, and there were certain  
42 kinds of issues that came up, and so on. By the time you took over—and I really would  
43 like you to talk about this—as I listened to your title, it seems to me that's almost two  
44 different positions. It's like being a vice president of the Institution and also a dean. Is  
45 that true? I mean do they overlap a lot, or are they significantly different, one than the  
46 other?

47 FARRINGTON: No, they overlapped. I mean there's . . . . There were institutional  
48 responsibilities that went along with them, sort of thinking Institution-wide, but from the  
49 perspective of education activities. And lately also I had responsibility at various times  
50 for other aspects of the Institution operations, as various associate directors came and  
51 went in other areas. And right now I've been responsible for many years for the library.  
52 For a short period of time I was uh temporarily responsible for publications and graphic  
53 arts and outreach. But that was because we were in the midst of changing from one  
54 associate director to another. So there are responsibilities that are Institution-wide, as I  
55 said, but there are also responsibilities directly to the education program and to  
56 interactions with MIT. So I look at it as the two titles are really mixed together.

57 TAYLOR: OK, but one of the things I'd like you to be able to talk about as we go  
58 through this: as a vice president of the Institution, you do have—you talked about—other  
59 duties that you have to do?

60 FARRINGTON: Um-hum.

61 TAYLOR: Also, I would assume, relationships with trustees, things like this? And as  
62 dean, not only the program as it exists here but also how you mesh with the MIT  
63 community, . . .

64 FARRINGTON: Um-hum.

65 TAYLOR: . . . because they have an equivalent position there?

66 FARRINGTON: Well, no, they actually have a person there that's called Director of the  
67 Joint Program at MIT, and . . . and one of the issues in the Joint Program has been that uh  
68 the position here at the Institution is much more focused and is at a somewhat "higher  
69 level," if you want to make that argument. [Thumps.] I don't look at it that way. On  
70 education activities in the Institution: I have a responsibility for all education activities of  
71 the Institution, whereas the person at MIT has responsibility only for the Joint Program,  
72 OK.

73 TAYLOR: Now how do you interact with that person?

74 FARRINGTON: Well, we are the co-chairs of a faculty committee that oversees the  
75 quality and admissions and progress of the students in the Joint Program, and also is a  
76 sounding board for faculty ideas and provides advice and input and ultimately decisions  
77 about what the curriculum is going to be.

78 TAYLOR: And, now, was it 1990 that you became dean?

79 FARRINGTON: Correct, in August.

80 TAYLOR: This was kind of a significant departure from anything you'd done before, or  
81 was it?

82 FARRINGTON: No, I'd . . . I'd spent some time here previously as Director of the  
83 [clears throat] Coastal Research [??], so I'd had some administrative responsibilities, but  
84 certainly not in a full-time capacity.

85 TAYLOR: OK, now when you came in, what was the state of the program?

86 FARRINGTON: Oh, it was excellent. In fact, I remember thinking to myself that, you  
87 know, the challenge of the job is not to goof up. [They laugh.]

88 TAYLOR: Now, you took over for Dr. Craig Dorman, Admiral Dorman.

89 FARRINGTON: Yeah, well, he was just acting dean while . . . while they were  
90 searching for a dean. I really took over from Charlie Hollister, and there was a  
91 difference, as I mentioned a little bit earlier. There was an external-review committee for

92 the Joint Program, and they said that, at the Institution, we really needed a full-time dean,  
93 because prior to that time the deans had been sort of a half-time position. People still  
94 pursued their research, and that was what Charlie Hollister was doing, as well. And the  
95 argument was that the Joint Program had grown to the point that not only the Joint  
96 Program in particular but the other areas of the Institution's education programs were  
97 such that it really warranted the attention of a full-time, senior leadership position, and so  
98 that's what they advertised for, and that was the position that I'm . . . that I was appointed  
99 to.

100 TAYLOR: OK, now was this position something that you saw and said, "Oh, I'm going  
101 to apply for that," or did people contact you, or how did it all come about?

102 FARRINGTON: Well, several people made it known to me that . . . that the position was  
103 open and that some people would like me to apply, and uh . . . . And then I received a  
104 letter from Craig Dorman saying, you know, in so many words, "I want to make sure you  
105 know that this position is open," which is not an unusual thing. I mean people do send  
106 letters out to prospective candidates, and so I was . . . . And I was sufficiently interested,  
107 as I said. I mean this, to me, was almost like a dream position, and so I applied [thumps],  
108 and then I was interviewed by the committee, and then ultimately they made their  
109 recommendation, and I don't know whether [thumps] it was me or two or three of us, or  
110 what, but Craig [thumps] then made the appointment from that.

111 TAYLOR: What was the interview process like for you?

112 FARRINGTON: Well, I met with the committee. They . . . they first asked a number of  
113 questions, which I thought was very good, and asked you to write down your answers and  
114 submit to them, and . . . and, you know, there were several of them. "What do you think  
115 are the strengths of the Joint Program, and what would you do differently?" "What's the  
116 role of the Institution in undergraduate education? How would you see the future?"  
117 "What's the role of the Institution in K-12 education?" Because remember at that point  
118 the nation was beginning to really talk, nationwide, about a crisis—so-called [thumps]—  
119 in science and math education, and so what were the responsibilities, what would the role  
120 of the Institution, how could the Institution [thumps] contribute there. "What was the  
121 role of the Institution in general outreach [thumps] educa . . .," in other words, all aspects  
122 of education [thumps]. So they would ask you to write down your thoughts with respect

123 to that. And then they interviewed me, and there were people on the committee: there  
124 were a couple of graduate students. There were faculty. The committee was chaired  
125 [thumps] by Joe Pedlosky, and I interviewed with a number of different people and talked  
126 with the other associate directors at the time.

127 TAYLOR: Now, was this really a departure for you? Your life really had been basically  
128 research oriented, and it sounds, based on the questions they asked you, that this was a  
129 real educational kind of thing. Respective of all the science and whatnot, this is  
130 educational philosophy.

131 FARRINGTON: Yes, but they wanted it framed within the overall mission and the  
132 aspects of the Institution—in other words, what is it that we should do as an Institution,  
133 you know, knowing us an institution and what we do, what is the appropriate role for the  
134 Institution? And my approach and the answer was OK, you know, the Institution clearly  
135 is front rank in research, and the Joint Program is a jewel. I mean we knew that. The  
136 committee that reviewed the Joint Program said it was a jewel in the crown of both  
137 institutions. That was the 1988 committee. And so the feeling was that, you know, how  
138 do you understand the culture of the Institution, which is not formalized education in the  
139 same way as it is at a university or a college, but nonetheless is formalized in the sense  
140 we have a formal joint program. We have the research experience activities for  
141 undergraduates. We have a postdoctoral program. So how we move from there? Or do  
142 we move from there as an institution, and what are your thoughts, and so that's what I  
143 addressed.

144 TAYLOR: OK, had you been aware of some of the difficulties prior deans had faced?  
145 As an example, there was a period of time where there wasn't much in the way of people  
146 opting for the oceanographic disciplines at that level. They just didn't have enough  
147 people coming in.

148 FARRINGTON: Well, there was a period of time where there was a concern nationwide  
149 about the number of people who were applying to go into graduate education in ocean  
150 sciences, and part of the question was, was that a nationwide trend in sciences, or was it  
151 just people didn't understand the oceans; there weren't enough opportunities? What were  
152 the issues? And they [thumps] had addressed that with a series of faculty workshops in  
153 the mid-80s, going into . . . . Actually we had one after I took over as dean. [Thumps.]

154 And interestingly enough it was one of these pendulum swings, where, you know, by the  
155 time you get things in place to try to fix the problem, the problem is fixing itself. And uh  
156 but there were still issues associated with getting people to apply to graduate school, and  
157 it wasn't specifically just in the Joint Program. There certainly were plenty of people  
158 coming in and applying in biological sciences, but not enough people in physical  
159 sciences, specifically physical oceanography and engineering.

160 TAYLOR: I'm looking for a viewpoint on this: is that a thing that is sort of a cultural  
161 thing? As you're well aware, I give tours at the Institution, . . .

162 FARRINGTON: Um-hum.

163 TAYLOR: . . . and I would say 99 percent of the people that come here for a tour think  
164 of oceanography as a marine biologist and that marine biologist swims with the whales  
165 and dolphins, and they're not necessarily even remotely aware of physical oceanography,  
166 chemical oceanography, and so on. Is that, do you suppose, part of the problem, why  
167 people weren't opting for this field—a lack of knowledge of what it's really all about?

168 FARRINGTON: Well, I think it might have been the lack of knowledge. I think there  
169 was also a question of other opportunities that were exciting. I mean there were exciting  
170 opportunities in space sciences. There were exciting opportunities coming up in . . . in  
171 biological sciences. Computer sciences was taking off, so there were a lot of different  
172 things happening. Also, there was an emergence of what we would call environmental  
173 sciences. Whereas, up until the mid-80s, oceanography was one of the few places that  
174 you could go into if you were going to (quote-unquote) “deal with the environment” in  
175 the graduate education level. But uh after Earth Day in 1970, and then moving  
176 progressively through, there was an evolution of the feeling that we should have grad . . .  
177 in the nation that there should be more graduate education in environmental sciences.  
178 And in many universities and colleges the natural resources departments, which were an  
179 outgrowth of agricultural research and forestry, in large measure, converted themselves  
180 into environmental sciences programs or departments and started being involved with  
181 issues like climate and riverine studies and lakes and so on, and interactions, sort of an  
182 interactivity, whole-environment approach. And from that perspective, that meant that . .  
183 . that there were other opportunities for the graduate students to go to in terms of graduate  
184 education—not just ocean sciences or meteorology, and it is true what you say. I mean

185 most people, if you think about going to uh an aquarium, for example. I mean what  
186 attracts people to an aquarium is . . . is uh the life, the ocean life, and what . . . when you  
187 have television shows, I mean it's very difficult to get people to talk about, you know,  
188 "Whoa, look at this change in salt!" in salinity; whereas, you know, if you have, as you  
189 mentioned yourself, you know, Jacques Cousteau, you know, "Look at this" brand-new  
190 critter, or look at the sharks swimming and so forth. That attracts people.

191 TAYLOR: So how do, then, someone like yourself that's a dean, how do you go about  
192 making something like this program attractive to qualified students?

193 FARRINGTON: Well, you tell 'em first of all that they have an unprecedented  
194 opportunity in the Joint Program by bringing both the resources of Woods Hole  
195 Oceanographic Institution and MIT together, and that that opportunity enables them to do  
196 front-rank research, scholarship with a graduate education in which they're unlocking the  
197 secrets of nature. Once you . . . . You know, once you discover that it's extremely  
198 exciting, if you find something that no one has found before, and on top of that that what  
199 you're engaged in, in large measure, has direct relevance in the next several years, and  
200 also for decades to come, in the quality of life that humans have living on our planet.  
201 And all you have to do is just say, you know, we should call it Planet Ocean instead of  
202 Earth. And that you're studying a part of a planet that's absolutely critical to the habitat  
203 that we live in, and you have an opportunity to . . . to [thumps] do research, to learn about  
204 that, and to make a contribution in life. No matter what career you have, whether it's in  
205 education or in government or in industry, academic [thumps] research.

206 TAYLOR: I know when you talk to people about this, trying to gain the whole idea of  
207 the scope of the oceans on the earth is really difficult. I mean as a teacher I found that  
208 youngsters could become very aware of the area of the oceans. I mean most of them  
209 could tell you, oh, over 70 percent, covered with . . .

210 FARRINGTON: Sure.

211 TAYLOR: . . . water and all that. And very, very few people have a feeling for the  
212 volume of the ocean.

213 FARRINGTON: Correct.

214 TAYLOR: It's also this way. It's just a huge, huge, unbelievably huge feature.

215 FARRINGTON: Right.

216 TAYLOR: And to try and interest people. It's an interesting way that you go about that.  
217 You have a faculty here. How is that faculty comprised? How do people teach here?

218 FARRINGTON: Well, anyone on the scientific staff here, and those recommended by  
219 their departments who are in senior technical-staff positions can be involved in the  
220 Institution's academic programs. And the way this works out is that we have, through the  
221 Joint Committee for Graduate Education and the various joint committees in the different  
222 disciplines, evolved a curriculum, and then we sit down and figure out, you know, which  
223 people are going to . . . which classes are going to be taught at MIT, which classes are  
224 going to be taught here. Sometimes that shifts over a ten-year period of time, even a five-  
225 year period of time. And then we look at the opportunities that people have for teaching,  
226 and we say, "Who would like to teach?" And people step forward. The problem actually  
227 is that more people want to teach than we have classes available for them to teach, and  
228 that's one of the frustrations that many of our scientific staff have now, unlike the  
229 beginning of the program, as you said, when it was rather controversial. And many  
230 people here had come to the Institution 'cause they didn't want to teach. But the  
231 evolution of the graduate program was a strategic decision by the trustees and the director  
232 at the time, and a few of the senior scientists that said, you know, the future of  
233 oceanography is going in the direction of expanding graduate education, and if we're  
234 going to attract the front-rank scholars that we need to keep the Institution viable to our  
235 scientific staff, we're going to have to offer them the opportunities to have graduate  
236 students. Because if we don't, then all these new programs are evolving in different  
237 places that didn't exist before, OK. There was only Woods Hole and Scripps and  
238 University of Washington. Now, all of a sudden, they're going to be all of the  
239 competitors out there who are going to be attracting these people, and one of the things  
240 that they're going to offer to them is the opportunity to interact with bright, young minds  
241 in graduate education, and if we don't have that opportunity here at Woods Hole  
242 Oceanographic Institution, then we're going to lose out in the long run.

243 TAYLOR: I recall one that I've done an oral history on—I'll leave the name out—and  
244 was very much against the program, and then his next comment was, "Boy, was I  
245 wrong," [laughs] in terms of . . . He thought it's been wonderful.

246 FARRINGTON: No, I . . . . Initially you could see where the resistance was. [Thumps.]  
247 You know, how were people here going to do this? I mean people weren't supported as  
248 they were at MIT, let's say, for six months of their funding at that time. And they hadn't  
249 had a lot of experience in teaching, and it's not something—as you well know—you can't  
250 just walk into a classroom and start teaching. I mean there are some people who can do  
251 that from their own innate [thumps] ability, but it is something that you have to (a) want  
252 to do, and then (b) you have to put some time and effort into learning about it. It's not  
253 simply, as I tell many of the [thumps] people coming into the Program--it's not simply  
254 going and giving your latest seminar to your colleagues. That doesn't work, OK. And so  
255 there were people who were very much against it from the perspective of how can we do  
256 this? And the Joint Program is unique. I mean if you look around the nation. I mean  
257 there are lots of cooperative programs and interactions and cross-registration, and so  
258 forth. I don't know of any—there may be one or two, but I don't know of them—  
259 program that gives a joint degree--that's one diploma from both institutions, the seal of  
260 both institutions on that—all decisions made collectively by both institutions through  
261 faculty advice. And it all started with a page and a half memorandum of understanding,  
262 which, basically, when you read it, says, “This looks like a good idea, and we want to try  
263 to offer a high-quality graduate education.” [Thumps.]

264 TAYLOR: It's amazing how many things in this institution have come from one-page  
265 memorandums and then have grown . . .

266 FARRINGTON: Right.

267 TAYLOR: . . . over the years, and this would be a good example. You have a staff, and I  
268 know some of them. You've got some really outstanding people. How do you  
269 cooperatively work with them in developing what's going to happen in the program?

270 FARRINGTON: Well, you said the key word, and that is “work with them.” And uh we  
271 . . . . You know, clearly when I started as dean the associate dean, Jake Pierson, had been  
272 with the program, programs of the Institution's academic, you know, education programs  
273 from almost the inception, certainly for the Joint Program. And one of the challenges  
274 was that we knew that, you know, Jake [thumps] eventually was going to have to retire,  
275 and the question was how do you move from, you know, one administrative senior person  
276 like Jake, hiring people to work with him and interacting with the dean, too, and

277 transition that knowledge to a number of a staff people so that we could have senior  
278 administrative staff who could continue the program irrespective of who the associate  
279 dean would be, or the dean. And uh . . . and so that's been my . . . . I would say, if  
280 there's one thing that I've done that I'm really proud of is that I've been able to . . . to uh  
281 work with Jake and transition his knowledge in such a way that we now have it spread  
282 across a number of people and cross-trained so that people can work together and no  
283 matter what happens in terms of a dean or an associate dean, the people will be able to  
284 provide the support for the program while the new person comes in as associate dean  
285 [thumps] or dean will evolve their own style and their own programs and leadership and  
286 move in new directions. So the things are not going to fall off the end of the earth just  
287 simply because one person leaves or even two people. [Thumps.]

288 TAYLOR: Jake was with the program since its inception, so he was a constant through  
289 all those years.

290 FARRINGTON: Correct.

291 TAYLOR: And as I listened to him describe his experiences, extremely competent and,  
292 oh, for example, he took a certain amount of pride, I guess you'd call it, in that he read  
293 personally every application that came in, . . .

294 FARRINGTON: Sure.

295 TAYLOR: So he was just this well of information on what was coming in, and I'm sure  
296 he could see trends and all that sort of thing. Now you've got Judy McDowell.

297 FARRINGTON: Um-hum.

298 TAYLOR: Of what value to you as a dean are these associate deans?

299 FARRINGTON: Oh, tremendously valuable, because what we've done is that Judy . . . .  
300 Judy has been the only one in that position, but I can see that this will trend. I mean her .  
301 . . her appointment [thumps] will be up in another year uh after the new dean comes in  
302 [thumps], and uh then there'll be an opportunity of a one-year overlap, and then she will  
303 be moving to other things, and there'll be another associate dean—I assume—but that's  
304 going to be up to the new dean to work it out. The connectivity there was to bring  
305 another senior scientific staff member into a senior leadership position, and to provide for  
306 that, so what it did when Jake retired we took some of his position responsibilities and  
307 put it with the associate dean on a part-time basis, OK? Whereas Jake was full-time, and

308 then we took some other parts of his responsibilities—as registrar, for example—and put  
309 that with other people, and his budget responsibilities with somebody else. And so we’ve  
310 spread that around to a number of different people, as I said, so that now we have a . . . a  
311 good professional administrative staff that can keep things running, OK: understand the  
312 details, under the administrative and support needs of the program, OK. Now in terms of  
313 what does Judy do—Judy reads every single application to the Joint Program too, OK. I  
314 receive . . . . I read and have read every single postdoctoral application that has come  
315 into the Institution, and then I do look at the ones, the graduate students who’ve reached  
316 [thumps], you know, the final stages of selection to figure out what’s going on there so  
317 that I’m familiar with that. But I rely very much on . . . on Judy and the Admissions  
318 Advisory Committee [thumps] to . . . to look at the quality of applications of the people  
319 coming in. And the reason we can do that now is that we’ve grown and matured as an  
320 educational program. So people have been involved in this now, you know, for a long  
321 period of time—over 30 years. So there’s . . . there’s a built-in experiential factor now  
322 that didn’t exist when we first started, and Jake was the lynchpin for that. And you  
323 needed somebody like him to always constantly be there to provide that across-the-board  
324 look. But now, the faculty, if you will [thumps], the scientific staff who are our faculty,  
325 have taken on much more responsibility for that, and that’s good.

326 TAYLOR: Now, putting all this together, how do you determine what a qualified student  
327 is to come into this program?

328 FARRINGTON: I don’t determine that. The faculty determine. [Thumps.] But I’m  
329 responsible for setting up the guidelines and the process by which they undertake that  
330 determination, and to make sure that they adhere to that process, and to help them with  
331 that process, to guide them, to agree with them on the process. What they look for, what  
332 I look for along with them, is a person who is very bright, has a clear interest in ocean  
333 sciences, has a degree of independence that will allow them to take advantage of the  
334 opportunity of the Joint Program. Now this is a pretty, you know, it’s a pretty tough  
335 academic program for people to come into. Uh it’s . . . it’s, you know, maybe  
336 unfortunate that they use the argument at MIT that being educated at MIT is like drinking  
337 from a fire hose, OK, but that is true nonetheless. I mean it’s a pretty competitive  
338 environment, and down here it’s equally competitive. People expect you . . . and treat the

339 students like junior colleagues. Now not all students are ready for that, and so you could  
340 have someone who is extremely well qualified in terms of, you know, all A's as an  
341 undergraduate; Graduate [thumps] Record Exam looks great. Application material looks  
342 great, but their statement might lend you to think, "Well, maybe they're not quite ready."  
343 They may be a little bit [thumps] immature in terms of their approach to things. That  
344 doesn't mean they won't be successful eventually in the field, but another graduate  
345 program might be better for them, and sometimes we have students come here and  
346 interview with us, talk with people, and then at the end of that interview and process we  
347 encourage them . . . .

348 [END OF SIDE A, TAPE 5]

349 FARRINGTON: . . . the judgment of what is significant and new is done by the faculty  
350 on the committee, and it's very difficult for many of the students to understand that it's  
351 not a question of how much time do you put in, how hard do you work, OK. And no  
352 one's going to tell you exactly what that new piece of knowledge is going to have to be.  
353 You have to find it out for yourself. And that's one of the most difficult things for the  
354 students to . . . to get their hands around. Some of them pick it up right away, and others,  
355 toward the end of their career, spend a lot of time in my office talking with me or talking  
356 with Judy McDowell, and frustrated, because they say their committee members don't  
357 agree on something, and what should they do? And what do they really need to do to get  
358 their doctorate degree? And . . . and I fall back on something that I tell them in the  
359 beginning [thumps] of their graduate education. There will come a time when you come  
360 in and talk with the associate dean or with [thumps] me or with somebody else, and  
361 you'll complain that your committee is disagreeing on something, and my answer will be,  
362 "Welcome to the [thumps] cutting edge of science, because if it was known [thumps]  
363 then you wouldn't be on the cutting edge," OK. Now what I often tell the students is,  
364 you know, "You need to think about what are the important problems for research in your  
365 field of expertise." And how do you figure that out? You figure that out from classes,  
366 from listening to seminars, and from reading in the literature. Find out what journals  
367 people publish in in your field, and read those journals. Look at the articles. Look at the  
368 titles first, and out of that scanning of titles, figure out which ones you want to look at the  
369 abstract of. Look at the abstract of those, and from those figure out which ones you

370 really want to look at the whole article. And from that you want to then distill this down  
371 to a set of problems that are both important to the field and those that really turn you on  
372 as an individual—you're excited about. Then you have to ask the next question: OK, out  
373 of all of these problems, which ones am I best qualified for to tackle because of my own  
374 background and education, and because of the resources I have available to me at Woods  
375 Hole Oceanographic Institution and at MIT, and that should narrow it down. And then  
376 you get to the point of: OK, who has, you know . . . . Resources also includes funding  
377 and which ones can I pursue, and which ones are tractable, and which ones can I get a  
378 committee to agree that they'll advise me on. And from that perspective, you get down to  
379 a few problems, and you start off on them. And you can expect that there may be a . . . .  
380 You know, there's a course laid out in your thesis proposal, but it's the rare thesis  
381 proposal that ends up being exactly the final thesis outline. [Laughs.] You . . . you  
382 deviate. [Thumps.] New things come along, and things happen. And the issue is that  
383 you have to practice that old adage, which is that "Chance [thumps] favors the prepared  
384 mind." And so when you see something new you should be ready to pursue that with  
385 your thesis committee's blessing and convince them that's the direction you need to go  
386 from your original broad idea.

387 TAYLOR: And then is the breaking point when the candidate can kind of take total  
388 ownership of that problem, and isn't looking for "What do I do now?" or "What do I do  
389 next?" kind of thing?

390 FARRINGTON: Well, it is true. But I think most candidates would agree that they are  
391 the 90 percent owners or the 80 percent owners, and that their advisor, the co-advisors  
392 and the committee also has some contribution [thumps] to that. But they're the majority  
393 owner, if you want to put it that way, of that idea. If they're not, then it's not going to fly  
394 as an acceptable thesis.

395 TAYLOR: It's a difficult procedure, isn't it?

396 FARRINGTON: Sure. It's a lot like . . . . I know the analogy doesn't play well with  
397 most students, but some of them I try to explain it to them, "Look [thumps], you know,  
398 this is . . . . What the faculty can do for you is very much . . . . Think about a sculptor  
399 and a student who's going to become a sculptor, OK. [Thumps.] We can tell you about  
400 all the great sculptors. We can tell you about what their studio looked like and how that

401 influenced what they did, what materials they worked in, and what are the properties of  
402 the material, and uh . . . and various ways that people went about doing it. But ultimately  
403 you get your own lump of clay and you start working on it. And the role of your  
404 committee is that they come by from time to time and say, ‘Gee, you know, the ear’s too  
405 big or the nose doesn’t look right,’ or something like that. But eventually you yourself  
406 are inspired. You’re inspired to do something with that by the knowledge that you’ve  
407 got, and ultimately you end up with a statue as a sculptor, and your committee’s: ‘Ah!  
408 That’s great!’” [Thumps.]

409 TAYLOR: [Laughs.] OK, OK, understand. John, we’re scheduled up till 12 o’clock,  
410 and we’re hitting 12 o’clock here now, . . .

411 FARRINGTON: OK.

412 TAYLOR: So I think this would be a good place to stop.

413 [END OF TAPE 6]

414