

**Frances Lawrence Parker
Research Geologist, SIO, UCSD**

**Interviews conducted by
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INTERVIEW HISTORY

Frances Lawrence Parker came to the Scripps Institution of Oceanography in 1950 and founded the Marine Foraminifera Laboratory at Scripps with Fred B. Phleger. This made her one of a very small number of women scientists at SIO at that time.

Parker was born in Brookline, Massachusetts on March 28, 1906, the daughter of Philip Stanley Parker, a judge, and Eleanor Payson Parker. She received an A.B. degree from Vassar College in 1928 with a major in geology and a minor in chemistry. While at Vassar College she went on two geological field trips in 1926 and 1928 to Wyoming with geologist Thomas McDougall Hills. Parker received an M.S. in geology from the Massachusetts Institute of Technology in 1930.

While at MIT, Parker took a course with Joseph Cushman, the preeminent micropaleontologist, and became his research assistant at the Cushman Laboratory in Sharon, Massachusetts. Cushman studied foraminifera with funding from the U.S. Geological Survey. Parker took and passed the USGS examination, and was appointed assistant scientist (paleontologist) and her salary at the Cushman Laboratory was paid by the Survey. In 1932, Cushman and Parker traveled to central Europe where they examined type specimens and visited scientists, museums, and laboratories engaged in research on micropaleontology. They published sixteen papers together between 1930 and 1940.

Parker spent summers between 1936 and 1940 doing research at the Woods Hole Oceanographic Institution, where she shared a laboratory with Fred B. Phleger. From 1940 to 1943, Parker worked as academic secretary at Foxcroft School, an exclusive girls' school in Middleburg, Virginia. In 1943, she received several offers to work as a scientist in the petroleum industry and accepted a position as senior paleontologist at Shell Oil Company in Houston, Texas. Parker recalls that her interest in ecology began in Houston, and that the Shell Oil Company group with which she worked broadened her interests from foraminifera taxonomy to the application of the tools of micropaleontology to studies of the environment.

There is a natural connection between foraminifera research and the petroleum industry. Foraminifera are microscopic marine protozoa that secrete a calcareous or arenaceous shell. They live in all marine environments and are both planktonic and benthonic, and upon death the shells accumulate in sediments on the ocean bottom. Scientists use these remains as a record, which enables them to learn about marine environments over a long timescale. Petroleum is generated by heating organic matter deposited within marine sediments. Foraminifera in the layers above and below these layers help constrain the age of source rocks rich in organic matter, and foraminifera within the source rocks indicate the environment of deposition. This information helps in exploring for undiscovered petroleum deposits. Consequently petroleum companies have long been interested in and have supported work in this field.

Parker left Shell Oil Company in 1945 when she became ill with tuberculosis. While recuperating in Boston in 1947, she received a job offer from Fred Phleger who was on the faculty of Amherst College and spent summers at WHOI. He had a small research grant from WHOI, and Parker joined him to undertake work on the taxonomy of Atlantic foraminifera. Phleger and Parker worked together at Amherst College and continued at WHOI in 1949. While most of Parker's earlier work was on benthic foraminifera of the Atlantic, she published a series of studies on

foraminifera from the Gulf of Mexico beginning in 1950. She also did important work on micropaleontology of the Mediterranean working from deep-sea cores collected during the Swedish Deep Sea Expedition.

Phleger, a native Californian, decided to move west in 1950. The Scripps Institution of Oceanography in La Jolla, California offered positions to Phleger and Parker, and in 1950 they established the Marine Foraminifera Laboratory at SIO. The laboratory was initially supported by grant funds from the American Petroleum Institute, but later was substantially funded by the Office of Naval Research and the National Science Foundation.

Parker was appointed associate in marine geology at SIO in December 1950. Her job title was changed to junior research geologist in April 1952 and to assistant research geologist in July 1952. She took a leave of absence in December 1953, and returned to SIO a year later. She was advanced to associate research geologist in 1960, and to research paleontologist in 1967. Parker retired from SIO in July 1973, but continued to work as a non-salaried research associate for another decade.

Parker's years at SIO were prolific. She published over thirty papers as author and co-author with Phleger and other SIO colleagues, and she edited the *Contributions from the Cushman Foundation for Foraminiferal Research* from 1956-1963. Parker conducted research on all aspects of foraminifera: taxonomy, stratigraphy, biogeography, ecology, sedimentology, and paleoenvironment. Many of her publications on benthic and planktonic foraminifera are regarded as classics. Her work on planktonic foraminifera, which began in 1960, is judged particularly important. She developed a new high-level classification, down to the genus level, based on the presence and absence of spines on the shells of the planktonic foraminifera. Her approach to taxonomy is now generally accepted as the basis of classification for all Cenozoic planktonic foraminifera. Her work on foraminifera stratigraphy was important to the Deep Sea Drilling Project (DSDP), an NSF project headquartered at SIO from 1966-1986 which collected cores of ocean bottom sediments around the world. Parker went to sea only once, on a cruise of the DSDP drilling vessel *Glomar Challenger* late in her career.

Frances Parker was honored as a pioneer of modern micropaleontology when she received the Joseph A. Cushman Award for Outstanding Achievement in Foraminiferal Research in 1981. She was an honorary director and fellow of the Cushman Foundation for Foraminiferal Research. The U.S. Geological Survey named a bank on the Louisiana Shelf in the Gulf of Mexico the Parker Bank in her honor in 1976 (the Phleger Bank is nearby). In 1999, she established the Frances Parker Program in Public Education in the Earth Sciences at SIO.

This interview was conducted at Frances Parker's small apartment at the Chateau La Jolla, a residential retirement community in La Jolla, California, at 10 a.m. on November 15, 1999. We had met on several occasions at the Scripps Institution of Oceanography in the past, but we had never talked in depth about her career. Miss Parker promised me an hour when I made the appointment for the interview, and she warned me that she was ninety-three years old and might get tired. I found her seated in a comfortable overstuffed armchair surrounded by spoken books. An unreliable leg kept her off her feet, but her only complaint was that her sight was no longer strong enough to permit her to read. Her voice was strong and her memory was excellent. We talked for an hour and a half. A British micropaleontologist arrived for a visit just as I left.

The interview covered Miss Parker's life in chronological order. I prepared for the interview by examining the Frances Lawrence Parker Papers, a small collection at the Archives of the Scripps Institution of Oceanography. I also read several of her most important scientific papers and discussed her career with Wolfgang Berger, Susan Burke and several others at the Scripps Institution of Oceanography. Miss Parker did not review or edit the interview transcript, although she listened to the tape recording and asked me to correct two errors. She later confirmed several names that she did not recall during the interview.

This interview is one of a number of interviews with Scripps scientists that form the SIO Centennial Oral History Project. The project is supported from funds provided by Wolfgang Berger of the SIO Director's Office. I wish to express my thanks to Wolf Berger for his support and to Elizabeth N. Shor who transcribed the interview.

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March 28, 2000

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INTERVIEW: 15 NOVEMBER 1999

Day: ##¹ I know you were born in Brookline, [Massachusetts].

Parker: Born in Brookline.

Day: March 28, 1906.

Parker: We were about a hundred yards from Boston.

Day: I've been there. Was your family from Brookline?

Parker: No, they really were not. My father was born in Boston, and my mother was born in Belmont, I think. I'm not sure—from that area, same general area.

Day: Were they educated in science, your parents?

Parker: No, my father was a lawyer and a judge. My mother—I think she went to a kindergarten-training course in town, and worked before she was married, when she was very young.

Day: What was her name?

Parker: Eleanor Payson.

Day: That was her maiden name?

Parker: Yes.

Day: And your father's name?

Parker: Parker. Philip S. Parker.

Day: I remember you told me you used to vacation in—.

Parker: Could you speak a little louder? I'm a little bit deaf.

Day: Okay. I know you used to vacation in Maine.

Parker: In Maine? No, Cape Cod. My family on my mother's side—my grandfather² bought an island down there, down on Cape Cod near Chatham. It's on that picture over there. [gesturing to a large framed print on the wall beside her]

Day: What was the name of the island?

¹ The symbol ## indicates that a section of tape has begun or ended.

² Gilbert Russell Payson

- Parker: Pochet Island.
- Day: Pochet.
- Parker: Yes, it doesn't look like an island there. It's surrounded—there's a bar that goes out to the left. See that dark patch down toward the left side?
- Day: I do indeed.
- Parker: That's the island. Marsh and suchlike things don't count as land, so if you're surrounded by marsh, you're an island.
- Day: And why did they buy it? For vacations?
- Parker: He wanted to take his boys down there and take them shooting and teach them to do outdoor things of the kind that you do in a place like that. First he bought an island south of Hyannis, and it was too civilized for him, so he got rid of that and bought this other one.
- Day: I see. And how many children were there in your parents' family?
- Parker: You mean in my—.
- Day: Your siblings, brothers and sisters.
- Parker: I have three, two sisters and a brother.³
- Day: And were you the eldest?
- Parker: No, I'm the youngest.
- Day: Aha. Did you always plan to go to college?
- Parker: I did. I took the college course in school. I didn't think about it very deeply. I always planned to be a librarian.
- Day: Did you really?
- Parker: Yes. Do you want to hear the story of that?
- Day: Yes, I would.
- Parker: My senior year at Vassar College—I majored in geology all through college and I suddenly thought, I don't have to be a librarian. I can be a geologist. It just

³ Grace Hamilton Parker Luquer, Eleanor Gilbert Parker, and Philip Stanley Parker, Jr.

suddenly hit me like a storm that I needed to be a geologist so I quickly changed, dropped all the geology that I was taking and took nothing but English my senior year.

Day: That's great.

Parker: It's funny though.

Day: Where did you go to high school?

Parker: I went to a private school in Boston called the Brimmer and May School,⁴ called the May School. It's now combined with another one, so it doesn't exist.

Day: What made you decide to go to Vassar?

Parker: Partly because my sister did. She liked it and I liked the sound of it.

Day: But your mother hadn't gone to it.

Parker: No, she didn't go.

Day: And what was your oldest sister's name?

Parker: Grace.

Day: Grace. Was she a scientist also?

Parker: No, she was interested in botany, but she was not a scientist and not an intellectual at all of any kind. She had a tough time getting through college, actually.

Day: Vassar was one of the few colleges in the United States then that offered good science courses for women.

Parker: It wasn't as good as I hoped it would be, but it was quite good in certain respects. It was very bad in paleontology. We had a teacher that was more of a philosopher than a teacher. He wanted to philosophize about paleontology rather than teach it.

Day: So who influenced you to study geology?

Parker: I don't know. I think I took the beginning course there. I had to take a beginning course in some science, the way you do in college. I think I liked it, so I went on with it. I think it was just because I liked it. I don't know who really interested me in it.

⁴ The May School and the Brimmer School merged in 1939 to form Brimmer and May School in Chestnut Hill, Massachusetts.

- Day: So you got your A.B. degree there in 1928.
- Parker: Yes.
- Day: That's right. And that's with a major in geology?
- Parker: Yes.
- Day: Did you have a minor?
- Parker: I minored in chemistry.
- Day: Well that's helpful. Were there any particular teachers there that you liked or were particularly influential?
- Parker: No, I wouldn't say so. The head of the department, I called on him. I'd gone on a field trip. Everybody who went on field trips with him called him "uncle" so he was "Uncle Tom."
- Day: Do you remember his last name?
- Parker: Hills?⁵
- Day: And where was your field trip?
- Parker: Wyoming.
- Day: Oh, you went to Wyoming?
- Parker: Yes, we went for six weeks, combined with Ohio State boys. Four or five boys from Ohio State and four or five girls from Vassar. It was great fun.
- Day: And what was the plan? What sort of fieldwork were you doing?
- Parker: It was mostly glacial geology, because that was what my boss was interested in. And he liked climbing mountains. So we climbed mountains and would do the geology from the top of the mountain, while looking over the landscape.
- Day: Was that your first trip to the west?
- Parker: Yes. I fell for it.
- Day: Did you?

⁵ Dr. Thomas McDougall Hills (b1881) was assistant professor of geology at Ohio State University from 1910-1920. He became professor of geology at Vassar College in 1920. *American Men of Science*, third edition (1927) lists his chief area of research as the glacial geology of Bitterroot Mountains, Montana.

- Parker: I certainly did.
- Day: I know the feeling.
- Parker: I was actually crazy about it.
- Day: You must have gone by train then.
- Parker: Yes.
- Day: So you saw a good amount of the countryside on the way.
- Parker: Not as good as I did in later years driving across, which I did several times.
- Day: Were you a great walker or mountain climber at that point?
- Parker: No, I wasn't. We didn't do rock climbing-type climbing, just ordinary climbing.
- Day: One of the interesting people who have been working on the history of geology is a professor from UCSD named Naomi Oreskes. She said that in geology one of the problems was that men resisted taking women on fieldwork, so I'm very interested in your trip to Wyoming. Were you treated equally with the young men from Ohio?
- Parker: [laughing] The young men packed the horses and did that work. We did the more domestic stuff, washing dishes and that sort of thing. But otherwise, we were treated equally. I don't know how you'd treat them unequally, exactly.
- Day: Well, the fact that you went, I think, is quite significant. What year was that? Do you happen to recall?
- Parker: Nineteen twenty-six. Then I went again in 1928, but that was after I graduated. They were going to take another trip, so I just went along for some of it.
- Day: Where did you go that time?
- Parker: Wyoming. Same place. Another girl and I did that. We worked as much as we felt like, played the rest of the time.
- Day: I want to go back to that question about being a librarian versus being a geologist. When did you make up your mind that you were going to be a geologist?
- Parker: It just seemed to hit me, I would say in the fall of my senior year. It just suddenly hit me I didn't need to be—. I always thought a librarian worked with books and read them and what not, and then I discovered that a librarian did cataloging and stuff like that and realized that it really wasn't my cup of tea. And geology was.

- Day: So at that point did you decide to go to graduate school, or did you think you'd get a job?
- Parker: I guess I did. I can't know at what point I decided. It was probably during that year.
- Day: Did you have an advisor at Vassar who was helping you make these decisions?
- Parker: I don't remember.
- Day: And what led you to select MIT?
- Parker: I was born in Brookline, as I told you. I was going to go to Harvard, and then I discovered that in those days Harvard didn't give the courses I needed. Vassar was very good in some respects, in other respects it was very poor, and I needed more undergraduate work. And Harvard wouldn't take me on for that, and MIT would, so I changed to MIT.
- Day: And what courses did you think you were poor at Vassar?
- Parker: Paleontology, maybe historical geology, I don't remember just what.
- Day: And who was your professor at MIT?
- Parker: Lindgren was the head of the department.⁶ He was a mineralogist, and at that time I thought I might be a mineralogist, too. But I discovered that women weren't welcome down in mines and it was pretty hard to be a mineralogist, or for a female to be.
- Day: And so—
- Parker: There was a man who specialized in what I was doing—at Scripps and later working with foraminifera—who had a private laboratory near Boston, and he took students from MIT for once a week or something for a course during the semester, and I went out and took this course, and then he offered me a job.
- Day: This was Joseph A. Cushman?⁷
- Parker: Cushman, yes. He offered me a job, and I was heading for a Ph.D. but I was terrified of the idea of the orals. I've always been very shy of speaking in public, for a reason in my childhood, which I won't bother to tell you—I suspect anyway.

⁶ Professor Waldemar Lindgren (1860-1939), Rogers Professor of Economic Geology at Massachusetts Institute of Technology from 1912 until his retirement. Lindgren was an eminent mineralogist.

⁷ Dr. Joseph Augustine Cushman (1881-1949), geologist in the U.S. Geological Survey 1913-22 and 1926 until his retirement. Cushman was founder and director of Cushman Laboratory for Foraminiferal Research in Sharon, Massachusetts in 1923. Foraminifera were his specialty.

He offered me this job, and I thought this is what I want to do and this would be more valuable than getting a Ph.D. in mineralogy or what have you. So I went and worked for him. I was at MIT for two years and then I went to work for him.

Day: I want to back up for a second and ask you what your impression was of Dr. Lindgren, such a famous person.

Parker: He was a very nice person. He wasn't in my line of business at all, anything I had any use for, in economic mineralogy-type stuff. He was a very fine teacher, I think, creative. He was quite old then, he was at the point of retiring.

Day: When did you first meet Joseph Cushman and what was your impression of him?

Parker: I met Cushman because they gave this course out at his laboratory and I decided to take the course, so I went out to his laboratory and of course met him.

Day: What was the name of that course?

Parker: Oh, I don't remember what the name of it was. It was to go out and work with him twice a week, something like that, learn something about foraminifera. I don't recall what the name of it was.

Day: And how old was he at that time? When you first met him.

Parker: Cushman? Oh, I'm not very good at ages. I would say fifty, sixty. That's as near as I could come.

Day: What kind of job did he offer you?

Parker: Oh, I picked forams, with a brush, and I did a lot of—I washed samples. It was a system where you float them in carbon tetrachloride, you put dry sand in carbon tetrachloride and the forams float to the top. I did a lot of that, down in a basement that had no air coming in, and nobody knew how dangerous carbon tetrachloride was at that time. How I'm still alive I don't know, but I lived through it. I mean a room just permeated with it, evaporating with these washed dishes.

Day: And this was in the Sharon, Massachusetts laboratory?

Parker: Yes.

Day: Can you describe the laboratory? Was this his home?

Parker: His home was there and [the laboratory was] behind his home. He was married for a second time to a woman who was quite well off, I think. And I don't know just when he had the laboratory built, but some time along the line he had this laboratory built behind the house. A little small cottage fitted out as a laboratory.

So he was really at home all the time. He made a lot of money, too. He was the first one who decided foraminifera were valuable economically, for the oil company people, for finding out where they were in this column and so on. That's how he got started with the Geological Survey. He was a member of the Geological Survey, and after I'd worked there for a year, I was, too—what they call a WAE, which is “when actually engaged,” I got paid. In other words I wasn't hired for any specific time. I just worked when I could, and I got paid. I worked regular hours out there at Cushman's and they paid me on the [U.S. Geological] Survey. I had to take a general exam, you know, the way you have to for the Survey. I was one of the top three. I was scared to death that I was going to get the job [as] secretary of geologic names or something like that, which didn't appeal to me at all. They say it is very bad if you refuse if they offer you the job, and I was scared to death they would. But they gave me a rating, so that depended on what I was paid, you see. So I went along as a member of the Survey. I went abroad with the Cushmans after I'd been there two years. I had a diplomatic passport because I was a member of the Survey.

Day: That was in 1933, is that correct?

Parker: Nineteen thirty-two.

Day: What was the purpose of that trip?

Parker: To go to museums and look at specimens, look at the types, and meet the people, and so forth. Very interesting. I didn't know anything. [Cushman] told me he'd take me if I'd take a course in secretarial, so I learned to type. I went to Bryant and Stratton for six weeks and learned to type and do shorthand, which I never used. Actually, I didn't use any typing, either. I was mostly picking forams and washing samples down in dark basements. It was a fun trip, though. I had a good time.

Day: Who were the most important people in foram research at that time? Was Cushman really preeminent?

Parker: He was it. He really was the one that started it. I don't know whether Vaughan⁸ was working then on forams or not.

Day: Not then, I don't think.

Parker: Not then. I think just Cushman though I wouldn't swear to it. There were some people down in Texas. I told you I was bad on names. Doris Malkin⁹ was one.

⁸ Dr. Thomas Wayland Vaughan (1870-1952), geologist in the U.S. Geological Survey 1894-1939, and director of the Scripps Institution of Oceanography 1924-1936. Vaughan was a Texan. His specialties included corals, larger foraminifera and marine sediments in addition to stratigraphy and paleontology of Tertiary formations of the southern and eastern states of the United States. Vaughan's work on larger foraminifera grew out of his 1908 field work in Florida and the Bahamas but his most important papers in this field were published in the 1930s and 1940s.

What was the name of the other one?¹⁰ There were two women down there, older than I, who were working for oil companies. It may not have started until Cushman started it, I don't really know. They did foram work for oil companies. The other one whose name I know perfectly well, but, as I say—I'm ninety-three and it's hit me in the name department.

Day: Well, I'm only asking you to remember back about seventy years, so I think you do quite well [laughter].

Parker: I can remember most things fairly well but I can't remember names.

Day: I will look them up.

Parker: Any kinds of streets or anything else.

Day: I was just curious if you were going to Europe if Dr. Cushman was meeting with European scientists there?

Parker: Yes, European scientists; we met all the people in the places where we went.

Day: You went to Germany, I know. Did you go to England also?

Parker: No. I went to England later but—we went to Germany, Czechoslovakia, Austria, and down as far as Budapest. There was a German university there, and a Czech university, and they didn't like each other, so we had to not let one know that we were dealing with the other. Kind of entertaining.

Day: And did you bring some specimens with you?

Parker: No. We got specimens over there. I mean I did some picking in samples over there. But we didn't take any there. We were looking mostly at type specimens in the museums.

Day: What did your parents think of this interesting career that you had picked?

Parker: They never paid much attention. They let me do what I wanted to do, and they never seemed to have any opinions about it. They thought it was all right, whatever I wanted to do was all right with them.

Day: That's great. So you worked with Cushman until 1940.

⁹ Doris Malkin Curtis (b1914), paleontologist and geologist at Shell Oil Company 1941-1950, University of Houston 1950-1952, Scripps Institution of Oceanography 1952-1954, and University of Oklahoma 1954-1979, and an officer of the Society for Economic Paleontology and Mineralogy (SEPM).

¹⁰ Miss Parker later referred to both Caroline Ella Heminway Kierstead (1904-1985), professor of geology at Smith College in Northampton, Massachusetts, and paleontologist at Shell Oil Company in Houston, Texas 1943-1945, and to Helen Nina Tappan Loeblich (b1917), who worked as geologist for the U. S. Geological Survey.

Parker: Right.

Day: What happened in 1940?

Parker: We both decided we were tired of each other being around. I think he had a girlfriend around at one point. [The Cushmans] were breaking up, and he decided he wanted to get rid of me, too, he didn't want me around. There never was any of that kind of thing with Cushman as far as I was concerned. I'd just been there ten years and I figured it was time to do something else. But it was the wrong time, because all the oil companies were getting rid of their lab people at that time and they weren't interested in having anybody. So I went as secretary in a girls' school for three years. Then the war came and all the oil companies wrote letters: What are you doing? I could have gotten a job anywhere I wanted at that point.

Day: You went to Shell Oil.

Parker: I went to Shell Oil in Houston.

Day: What was the girls' school you worked at?

Parker: It was down in Virginia. Middleburg, Virginia. A good school where they were interested in riding, and there was a great deal of hunting and so forth, but it was a good school academically. I did a little bit of teaching, but I was the academic secretary. Foxcroft.

Day: Was that a disappointment to you? Becoming a secretary after working in science.

Parker: No. I knew it was only temporary. I didn't mean it to be permanent.

Day: I think your first publication was in 1931. Is that correct?

Parker: No.

Day: No. When did you first start publishing?

Parker: I worked with Cushman. He took the foreign point of view. Anything you did with him he was the head of, so everything was Cushman and Parker. But I did a lot of work on one special genus. That would have been my Ph.D. thesis. I did all kinds of stuff for him.

Day: And when you collaborated on the papers. Who did most of the work?

Parker: I did. I did the work and he looked at it.

Day: And where did you publish these papers?

- Parker: Mostly he had a little publication he did himself, called *Contributions of the Cushman Laboratory for Foraminiferal Research*. That came out—I think it was quarterly. I don't remember. I may have sent one or two to *Journal of Paleontology*, but mostly it was in the *Contributions*.
- Day: Were there other people besides you working with Cushman in those years?
- Parker: Yes. There was a man from the Survey named Lloyd Henbest¹¹ who was there. He was working on large foraminifera. He was there for a year or two, I forget how long. Then students used to come out from Harvard and take courses. They'd come out once a week. They used to go part way out of Boston on the trolley and then I'd pick them up in my car and take them the rest of the way. Fred Phleger¹² was one of those.
- Day: Aha. That's the connection with Phleger.
- Parker: Yes, Fred Phleger was one of the students who went out there.
- Day: Great. Now let's go back to Houston for a second. You were in Houston for two years.
- Parker: I was in Houston for three years.¹³
- Day: Three years.
- Parker: I was going to leave [Foxcroft] after two years, but the headmistress—I mean the head of the academic part—was going to be away and she wanted me to stay and help steer the substitute. So I said I would if they'd raise my pay. I was paid a hundred dollars a month at that point, big deal.
- Day: And what was the name of the department head?
- Parker: Her name was Wellington and then she married before that time, and I can't remember what the name was. That's not important.
- Day: What were Shell Oil's interests?

¹¹ Lloyd George Henbest (b1900) geologist and paleontologist with U.S. Geological Survey, 1926-1930, a micropaleontologist who later became a director and president of the Cushman Foundation for Foraminiferal Research.

¹² Fred B. Phleger (1909-1993), micropaleontologist, grew up in southern California and got a Ph.D. from Harvard in 1936. Phleger served as Cushman's assistant in paleontology from 1934-1936. Phleger taught at Amherst College 1937-1949. During this period he and Frances Parker worked together at Amherst and summers at Woods Hole Oceanographic Institution. Phleger was appointed to the faculty of Scripps Institution of Oceanography in 1949 and persuaded Parker to join the Scripps staff in 1950. Phleger and Parker founded the Marine Foraminifera Laboratory at Scripps in 1950, although Phleger was officially listed as director. Phleger retired from SIO in 1977.

¹³ Frances Parker worked at Shell Oil Company from 1943 to 1945.

- Parker: What?
- Day: Shell Oil. Why were they interested in funding this group?
- Parker: I wrote to a guy named Lalicker¹⁴ who had been at Harvard, too, and come out at Cushman's, and he was working in Houston. I said all of these companies want me and which one shall I go to? He recommended Shell. So I went to Shell. It didn't really make much difference which one I went to.
- Day: Did you drive out to Houston?
- Parker: I drove at forty-five miles an hour or whatever it was we were allowed to drive then, in my old Ford—and arrived in the middle of a hurricane.
- Day: Really!
- Parker: It was quite exciting because I hadn't planned where I was going to stay. You know a lot of the streets [in Houston] start and stop and pretty soon begin again. Well, I had to cope with that to find out where I was going to live. It was pure hell for the first year. I couldn't find any place to live. It was the beginning of the war, and I used to get up about five in the morning and go sit on doorsteps to see if I could be the first one there, looking in ads. The people I was staying with had three children under five years old, and I was expected to wash all the dishes and I couldn't wait to get out of that place. I finally did.
- Day: And then, as the war ended, you went to Woods Hole.¹⁵ Is that the next thing you did?
- Parker: When the war ended, the first thing I did was to go with a colleague, one of my superiors, Doris Malkin to find a hill. Had to go sixty miles from Houston to find a hill. It wasn't a very high one.
- I went to Woods Hole first in 1936. That was in my Cushman year. They offered me a fellowship there, a summer fellowship or whatever they called it. I've forgotten what they called them. And I went for three summers, four summers, '36, '37, '38, '39—four summers. And that's where I worked with Fred Phleger. He was doing one thing and I was doing another. We shared a laboratory, and we had a nice messy one. At Cushman's you had to put everything away every night, leave it pristine. That's where I got involved with Fred.
- Day: What was your appointment at Woods Hole? Were you a visiting researcher?
- Parker: I forget what they called them. It was a sort of a summer fellowship. I don't remember what the name of it was.

¹⁴ Cecil Gordon Lalicker (b1907), paleontologist at the University of Oklahoma.

¹⁵ Woods Hole Oceanographic Institution, Woods Hole, Massachusetts.

Day: Were you working under Phleger?

Parker: No.

Day: Independently.

Parker: Oh, independently, yes. We worked on a few things together, but mostly not. Even after I went to work with him. That was another story. I left Houston because I had tuberculosis, and I went home. They offered me a teaching job down in Texas and I got my doctor to say that Texas was not a good climate for me—I mean Houston—so I didn't want to go back. So I was out for about two or three years. And then Fred was at Amherst and he wanted to get somebody—he didn't know very much about foraminifera, I mean he wasn't interested in the foraminifera. He was more interested in what he could do with them. I was interested in both. So he found that I was thinking about looking for a job and he offered me a job there. He said, "I can only pay you a hundred dollars a month, because that's all they were allowing from Woods Hole." He was getting the money from Woods Hole. I said, "Okay, I'll come and do it if you'll let me start an hour a day." So I went there and worked myself up from the TB business by working short hours and what not. What he wanted was somebody who would identify the foraminifera that he wanted to use in figuring out his stuff, his environmental stuff. So I did that.

Day: Now, you are really known for very broad ecological work with foraminifera. Can you talk about how you approached your work?

Parker: I approached it first from the taxonomic point of view, just identifying species and whatnot. I considered I had to do that before I could do anything else. I don't know whether you've heard about the API.

Day: The American Petroleum Institute.

Parker: That's how I was involved in it because Fred was interested in that, and so was Shepard.¹⁶

Day: Right.

Parker: After we'd been at Amherst for a year or so, Fred thought he'd go back to California, and I decided I'd go back, too. I was in the laboratory he started. He liked to direct things, and I liked to work.

¹⁶ Francis Parker Shepard (1897-1985), geologist known as the "father of marine geology." Shepard got his doctorate at the University of Chicago in 1922 and taught at the University of Illinois at Urbana 1922-1942. Shepard began working summers at the Scripps Institution of Oceanography in 1937 on marine geology and sedimentation and served on the Scripps faculty from 1942 until his retirement in 1964. Shepard published the first textbook in the field, *Submarine Geology*, in 1948. Shepard got grants from the Geology Society of America and the American Petroleum Institute beginning in 1937.

Day: Just checking to make sure the machine is still running; I don't want to miss anything. Can I ask you first what Woods Hole was like in 1936? Was it fun there?

Parker: Oh, it was more fun. I had the best time at Woods Hole. We worked, and we did a lot of playing, too. It was really a lot of fun because there were a lot of scientists there at the Oceanographic Institution, which was where I was. Generally known as WoHOI.

Day: Did you know Columbus Iselin¹⁷ during those years?

Parker: Oh, yes, I knew Columbus. He used to take his boat over to Martha's Vineyard. He lived over on Martha's Vineyard and then he'd come over in his boat every day. Boy, he was a handsome man. Bigelow¹⁸ was the head at that time of the Woods Hole Oceanographic Institution. He was the man at Harvard.

Day: Right.

Parker: I don't know, we just had an awfully good time there. I did.

Day: Where did you live?

Parker: I rented a room. I went back [to Woods Hole] after Fred and I were working there. I went back there in the summers again. Later on, in the forties, I got a cottage to live in.

Day: Why did you and Phleger decide to move the Foraminifera Lab from Woods Hole to SIO?

Parker: Why did we do what?

Day: Why did you decide to go west?

Parker: Why, I don't know. I was interested in what we were doing and I thought it was a dandy idea to go west. I was all for it.

Day: You worked mostly with forams from the Atlantic at that point.

Parker: Yes, that's right.

¹⁷ Columbus O'Donnell Iselin (1904-1971), physical oceanographer trained at Harvard under Henry Bryant Bigelow. Iselin was director of the Woods Hole Oceanographic Institution 1940-1950 and 1956-1958. He was an excellent sailor and commuted to WHOI daily from his home on Martha's Vineyard in a forty-foot launch.

¹⁸ Henry Bryant Bigelow (1879-1967), Harvard zoologist, student of Alexander Agassiz, and first director of the Woods Hole Oceanographic Institution 1930-1939. Bigelow served as President of the WHOI Board of Trustees from 1939-1952.

- Day: And you had not worked on Gulf forams or—.
- Parker: No. The project that Fred had was down in the Gulf of Mexico, so I'd been working on forams from the Gulf of Mexico.
- Day: While you were at Woods Hole?
- Parker: Very intensively, not while I was at Woods Hole, while I was at Amherst. At Woods Hole I did work on the Atlantic, mostly.
- Day: So how did it happen that the Foraminifera Lab moved to Scripps?
- Parker: Well, Fred was a Californian, and he thought it would be nice to go out to Scripps. He knew the Scripps people, and he knew Shepard and so forth and so I tagged along. I thought it would be fun. I never really thought of Fred as a boss, he was really more a colleague than a boss, but we did some papers together. Like the Europeans, he was the head author. I did the taxonomy and identification, he did all the other parts, where he used them to describe the environments and so forth and so on. And then I got interested in marsh stuff for a little while. Then he did, too, and then he said, "I think it would be much better if you worked on something else." He remarked this to me, and that suited me all right. Then I got into an entirely different line of stuff, for one thing he'd never done at all. Except that we'd been working on planktonic forams together.
- Day: So at that point did you move into planktonic foraminifera?
- Parker: I moved into planktonic forams, also stratigraphy, a lot of stuff. So I was going back in time, which was something he never did. He just worked on marshes.
- Day: How was the lab supported at SIO? Was it API?¹⁹
- Parker: Yes, we got money from the API, but the Navy—what did they call it? The Navy had all the money for research at that time at the end of the war. That was before the NSF²⁰ was invented. So we got ONR.²¹
- Day: ONR money.
- Parker: Yes. We never had any trouble getting money. That was one thing Fred was good at. I'd tell him what I wanted to do and so forth, and he'd write it up. I almost never did what I said I was going to, but that was all right.
- Day: He wrote the proposals then.

¹⁹ The American Petroleum Institute funded research in geology.

²⁰ The National Science Foundation was established in 1950 and replaced the Office of Naval Research as the major funder in the field of American oceanography within a decade.

²¹ The Office of Naval Research was created in 1946 and was a significant funder of oceanographic research.

- Parker: He wrote the proposals. He was really good at that, and I wasn't.
- Day: And was Roger Revelle²² helpful at this point?
- Parker: Not to me. He may have been to Fred, I don't know. Roger was very nice. He didn't have much to do with that, I don't think; I don't think he had anything to do with that.
- Day: And where was the lab located when you first came to Scripps? Was it in Ritter Hall?
- Parker: In Old Scripps.²³ First we had a room downstairs and then we moved upstairs. We had the room that Hubbs's library was in originally. Five of us in one room. I was having hot flashes, I never knew how I got anything done. It would get so damn hot in that room. They were building Sverdrup²⁴ at that point and there was the most awful racket going on outside. However, I was working on Mediterranean foraminifera at that point. I don't remember what Fred was doing. Marshes, probably.
- Day: And what kind of equipment did you have?
- Parker: My father gave me a microscope, and it was a good one.²⁵ Tell me the names of microscopes, I've forgotten the names of everything. I sold it to Susan Burke.²⁶
- Day: And what was that—a birthday present?
- Parker: Oh, I don't remember. My father just said he'd give me a microscope. So he did. It cost three hundred and something dollars.
- Day: Scripps didn't buy you the equipment you needed?
- Parker: Oh, yes, they did. Later on I got a new microscope. After about seven or eight years I got a new microscope. It was the same kind, very similar. I didn't need much equipment. Slides, and, you know, small stuff. Fred got to go on field trips. I didn't go very much on field trips.
- Day: Why is that?

²² Roger Randall Dougan Revelle (1909-1991), physical oceanographer and fourth director of the Scripps Institution of Oceanography, 1950-1961 and 1963-1964.

²³ George H. Scripps Memorial Marine Biological Laboratory, the first building constructed on the Scripps campus, commonly known as "Old Scripps."

²⁴ Sverdrup Hall, named for SIO's third director Harald Ulrik Sverdrup.

²⁵ According to Susan Burke, who bought the microscope, it was a 1938 Leitz.

²⁶ Susan K. Burke (b1949), staff research associate, Geosciences Research Division, Scripps Institution of Oceanography, has an M.S. degree from Hawaii and is a student of Johanna Resig. Burke specializes in benthic foraminifera. She was given Frances Parker's office after her retirement.

Parker: I don't know. I really don't know. Finally, Fred said, "I think you ought to get to go on a field trip, get some money." And I was going on vacation. He said, "I think we ought to help you pay your vacation." So I did some field work on Cape Cod and also up at [Bowdoin],²⁷ Maine. I figured out a project that I could do from distance, got a colleague from Woods Hole to do collecting for me—periodical, seasonal collecting. Then there was a great Pooh-Bah when I came back. They wanted to know what the justification for this was. I was getting the money for going back east and so forth and so on. So I had to go through that, but that was all right.

Day: Was that ONR money that paid for that?

Parker: That was ONR, I guess. We were on the ONR when the NSF was born.

Day: And was there a program officer at ONR who visited you?

Parker: I don't remember. There may have been. There were program people. I think mostly they visited Fred and sometimes they'd visit me. I don't remember much about it.

Day: Did you go to sea at all?

Parker: No, I never went to sea until I went on the *Glomar Challenger*.²⁸ I didn't want to go for two months and sit on a well. I'd sat on wells down in Houston, so I went on a trip that they took east to try out a new piece of equipment. It was a two weeks' trip.

Day: That was on the *Glomar Challenger*.

Parker: That was on the *Glomar Challenger*. They tried out this equipment and then they went in to Boston harbor and dumped me very conveniently.

Day: So you had no interest in going to sea?

Parker: No. I'd had TB and I was a bit nervous about it, and also didn't sleep very well and I knew that—I didn't think I could stand it. They get you up at all hours, you know the watch hours and looking at samples and so forth. I didn't think I could stand that sort of existence at that point. I went home in 1955 and had a lung operation.

Day: Did you really? For TB?

²⁷ The name could not be determined from the interview tape. Miss Parker thinks it may be Bowdoin.

²⁸ D/V *Glomar Challenger* was the drilling vessel of the Deep Sea Drilling Program, a federal research program operated by and at the Scripps Institution of Oceanography from 1966-1986. It drilled for cores of deep sea deposits which were analyzed by many geologists and micropaleontologists including Parker and Dr. William Riedel.

Parker: Yes.

Day: Where was that done? In Boston?

Parker: Boston. The man out here warned me. I was going to a man at the Rees-Stealy clinic. He was supposed to be the best tuberculosis man out here. He said "If I were you, I'd go and get a lung operation," he said, "the shadows come and go and we really don't know what's going on." So I said, "Okay, if my doctor in Boston okays it, I will." So I went back to Boston.

Day: And that was in '55?

Parker: Yes, '55.

Day: You know, Thomas Wayland Vaughan had TB also.

Parker: Did he really? I didn't know that.

Day: He picked it up when he was working in the Caribbean on coral.

Parker: I don't know where I picked it up. It's a mystery to me.

Day: Did you teach?

Parker: I taught for a little while when I was at the school in Foxcroft. I taught beginning algebra for a year, and I taught some English girls that had been practically English royalty, nobility, that sort of thing. And they didn't have anything suitable on the math line for them at Foxcroft, so I taught them how to keep a checkbook and a few other little useful things like that. I also taught a sort of course in beginning physiography. I made up a baby course and started going and looking at an old river going into an old brook, which I think was really good fun. Three of them: Lady—? I can't remember the name; and a friend of hers who came, too; some other girl. I didn't do any real teaching, I mostly was doing secretarial stuff. I only had a fight with one teacher the whole three years I was there, and I think that's damn good.

Day: What did you fight about?

Parker: I don't remember. I think she was having boils or something, and her temper was not of the best.

Day: But you never taught at Woods Hole, for instance? You didn't have seminars or anything like that?

- Parker: No. I've never been any good at that kind of thing. At Scripps I used to teach during one of the courses there, certain things about forams.²⁹
- Day: And which course was that? Was that the general oceanography course?
- Parker: A course that Fred had, or Shepard had, or something. General stuff.
- Day: And what was your first impression of Scripps, in California, when you first came here?
- Parker: Oh, I liked it very much.
- Day: Where did you live in La Jolla?
- Parker: When I first came I lived in the garage apartment at the Revelles.
- Day: Aha.
- Parker: That was just for a couple of weeks until I could find something. Then I found an apartment on Ravina Street behind a house. But eventually I got a little cottage right where 949—that great tall thing—is sitting now. I had a little cottage there. That was very nice. I lived there for five years. I went home for the operation, and then my sister came out and taught at Bishop's.³⁰
- Day: Is this Grace?
- Parker: No, this is Eleanor. My little sister. She came out and taught at Bishop's, so we lived together for the rest of the time.
- Day: Was she married?
- Parker: No.
- Day: She never married?
- Parker: No. My older sister was married. She was the only one of the three of us [who married]. ##
- Day: ## [Did your brother follow] in your father's footsteps. Was he a lawyer?

²⁹ Throughout the 1950s SIO offered two courses that dealt specifically with foraminifera: Oceanography 218, Marine Sediments, and Oceanography 219, Micropaleontology. The course catalogs of the period list several faculty members who taught Marine Sediments; one of these was Francis Shepard. Phleger is listed as the teacher for Micropaleontology. Frances Parker is not listed in the catalog as a teacher in any of the courses.

³⁰ The Bishop's School is a private high school in La Jolla, California that was founded with contributions from Ellen Browning Scripps and Eliza Virginia Scripps.

- Parker: He wasn't an intellectual at all. I mean he didn't have really many brains. He did various things. He was in the war, First World War, and he didn't get any farther than Camp Devens.³¹ He was a lieutenant. I mean he went to officers' school and got to be a lieutenant. Then he never really did much of anything. He helped run apartments and various things but he didn't—I don't know, he just didn't have the brains for that sort of thing. He never was an academic person at all.
- Day: So you're the only member of your family really who—.
- Parker: My sister Eleanor did, too.
- Day: She was the teacher at Bishop's?
- Parker: She was eventually a teacher at Bishop's. She had rather a checkered career. She started at the Deaconess School in New York and then she went to Teachers College at Columbia [University] and then she went abroad to Oxford for a year and she went to Harvard graduate school. Eventually she got a degree in some line, I don't know what.
- Day: Was she a scientist as well?
- Parker: No. She was an English teacher. She taught junior and senior English here at Bishop's.
- Day: Well, getting back to SIO, can you tell me how SIO differed from Woods Hole? Were they very different?
- Parker: Yes, they were very different, and the environment was so different, in a way. They were both small then and fun to be at. That was before they began to swell. Carl Eckart³² was the acting head when I went and then Roger came along.
- Day: Did you interact with Revelle and Eckart a lot?
- Parker: Did I what?
- Day: Did you see them a lot? Did you go to staff meetings every week?
- Parker: Yes, I think I did, more or less. I was pretty much on a par with other people. I wouldn't say the same of Nierenberg.³³ I don't think he knew I existed, and I'm sure I didn't care whether he existed or not, so that was all right. I was treated

³¹ Camp Devens was an Army training base near Boston, Massachusetts.

³² Carl Henry Eckart (1902-1973), physicist and first director of the Marine Physical Laboratory, served as director of the Scripps Institution of Oceanography 1948-1950 with Roger Revelle as assistant director.

³³ William Aaron Nierenberg (b1919), physicist and director of Scripps Institution of Oceanography 1965-1986.

pretty equally with the men as far as pay went, but I was never put on committees except ad hoc committees.³⁴

Day: Your appointment was as a research geologist, is that right?

Parker: I've forgotten how it goes there. I was a research paleontologist, I guess. I had an awful row with one of the secretaries once, because she said, "You can't be that." She insisted that I was paid as if I had a doctor's degree. She called me a doctor. I thought, I'm not a doctor. She said "You're paid like a doctor," and I said, "I sure am." That took care of that. I'd really done all the work for a doctor's degree, something that was equal to a thesis and heaven knows I'd published enough stuff since. I never took my oral exams; that was the only thing.

Day: You'll have to tell me why.

Parker: Why what?

Day: Why you wouldn't take the orals, why you were so worried about it.

Parker: Oh, I was busy. Oh, I think it dated back to my childhood. My music teacher—her teacher had a recital for pupils of her pupils, and I broke down in the middle of mine several times. The teacher was very nice about it, but my teacher was not nice about it at all. She would hardly speak to me afterwards. I was very much in the doghouse. I remember walking home with her, and she didn't say a word. I don't think that was very good for me. I know I never wanted to speak in public. I could if I read it. I remember breaking down at Vassar once or twice—just because one line went all astray. So I got sort of frightened of getting up in front of people and speaking. I was in some later on, but I had it neatly typed and read it.

Day: I was interested because Phleger had a faculty appointment.

Parker: He could talk about anything. He could get up and talk very well for an hour about nothing. He was trained in drama. He was into dramatics with Marge.³⁵

Day: And, of course, she was in with the La Jolla theater group.

Parker: Well, not really. They were very much interested in it. I used to go to those every week. There was a bunch of us who used to go every week to those plays. Carl and Roger's family and some other people, I don't know. A bunch of us used to

³⁴ SIO Staff Council committees included standing committees and ad hoc committees. Standing committees planned buildings, oversaw operations of the library, and undertook other ongoing work. Ad hoc committees were established by the director as needed to solve short term problems. Parker is not referring here to peer review committees that were appointed by the Faculty Senate.

³⁵ Margery Temple Phleger (1908-1986), wife of Fred B. Phleger, had a degree in theater arts. She was a founder of the La Jolla Playhouse, a theatrical company in La Jolla. The Phlegers both appeared in amateur theatrical productions.

go every month or week or whenever it was they had it changed. But Fred was just a born show-off, just a bit. He really was good at it.

Day: I'm asking you this because I wondered if there was a difference between women scientists at SIO and the men.

Parker: Well, I think there was a difference at the beginning anyway. I got the same money, I think, that the men did, but, as I say, I wasn't put on committees but the ad hoc committees. And I thought that was swell. I didn't want to be on committees anyway. I wanted to do my work. I don't think anybody really likes to be on committees. I told some female who was there about that later on, and she was horrified at it. I said I was elated not to be put on committees. I remember in Nierenberg's day, I really had no status at all, I don't think socially. I remember there was a party that I strictly wanted to go to, and I wasn't invited to it, and although men at my same level were invited, I was not. I was quite unknown. I probably could have done something about it if I'd made a fuss. I didn't like to make a fuss.

Day: There were a few women besides you at Scripps at that point.

Parker: I can't remember their names.

Day: Betty Boden.³⁶

Parker: Betty Boden. There was somebody before that. There was a girl in physical geology, physics I mean. She went off up north somewhere.

Day: Was that June Pattullo?³⁷

Parker: Might have been. Then there was another girl in the biology department whose name I also can't remember. Those were about all. Then Betty Boden came along. I think I was there before she was.

Day: I was wondering if you could tell me what your first impression of Roger Revelle was, and when you met him.

Parker: Roger? I met him almost immediately. I don't know. We all went out to dinner together, a whole bunch of us. Jean Hosmer³⁸ was secretary for Fred, assistant I should say, not secretary. We lived in that little garage apartment at the Revelles for a week or so, then she got out and I got out. I don't know. You just ran into Roger at meetings and all over the place. I never was really socially involved much with the Revelles. I've always know them. We would greet each other with open

³⁶ Elizabeth Maitland Kampa Boden (1922 -1986), marine biologist. She entered SIO in 1944 as a student of Carl Leavitt Hubbs and got her doctorate in 1950. She was a staff biologist at SIO 1954-1977.

³⁷ June G. Pattullo (b1921), physical oceanographer. She got her doctorate at SIO in 1957 under Walter Munk and joined the faculty of Oregon State University in 1960.

³⁸ Jean Peirson Hosmer, senior lab technician in the Foraminifera Laboratory.

arms and all that sort of thing. I didn't run in their social—I couldn't keep up a social life at work, too, and get over a lung operation all at the same time.

Day: What kind of hours were you putting in at the lab?

Parker: What?

Day: What kind of hours did you keep at your laboratory?

Parker: Well, theoretically from eight to five. That I did for a long time. Then I kind of lapsed and went from eight-thirty to four-thirty, but I made up for it afterwards because after I retired I worked for a long time without pay, doing the kind of work that nobody else could do, not research but other things. Taking care of samples, dealing with Bramlette's³⁹ library and various other things that nobody else could do. I enjoyed it. I liked being associated with it still after I retired. I didn't get paid. We had a hundred great big drawers in a room—I think there were about a hundred of these great big drawers full of samples. I went through all of them and threw away some and dealt with others and packed them up and sent them down to the core locker. All kinds of stuff like that.

Day: What did you think of Bramlette?

Parker: Bramlette was quite a guy. He was a very excellent scientist. I'm told that Jerry Winterer⁴⁰ wants to come and talk to me about Bramlette. He has to write up something about him. He was the most honest scientific person—what's the word that I want?

Day: Integrity?

Parker: Integrity, yes. He never would admit to anything unless he was absolutely sure. But he didn't get along with people too well. He was always sort of furious because he didn't have more students to work with him. They didn't want to ask students; he didn't want to teach. He was in some ways a difficult person. He never stopped smoking. He died of emphysema in the end. That was what was wrong with him.

Day: He was very slender, right?

Parker: Yes, he was slim, and temperamental in some ways. I always got along with him very well.

Day: What about Fran Shepard?

³⁹ Milton Nunn Bramlette (1896-1977), professor of geology at SIO 1951-1962.

⁴⁰ Edward L. "Jerry" Winterer (b 1925), studied with Bramlette at UCLA and became professor of geology at SIO.

- Parker: Oh, I got along fine with Fran. Oh, I think he got kind of mad at me towards the end of his life because I was kidding him so much about his weather stuff that he was fussing with. That was kind of a waste of time. Fran Shepard, I think, was a very good descriptive scientist. I don't think he was a very original one. I don't want to be quoted on this though.
- Day: That's all right.
- Parker: Is that on the tape?
- Day: Yes. I can restrict it for a period of time, if you like.
- Parker: I didn't want to say anything. Fred and I took his course.⁴¹ We nearly died of boredom. We both thought it was a good idea if we did [take the course], so we did. Fran was not a good teacher. Fred was an excellent teacher. Fran may have been a better scientist. I don't know whether he was or not. He never did much original work. It was mostly descriptive work he did.
- Day: How about Bill Riedel?⁴² Did you meet him when he first came?
- Parker: Oh, Bill Riedel was living in the house in front of me when I had my little cottage. He was boarding with a woman in front. He used to come down and eat with me, and he didn't have any money so he'd put what he could afford to put into the teapot and I would feed him. I've known Bill Riedel ever since he was here.
- Day: What did you think of him? He must have been a young student when you first met him, fresh from Australia.
- Parker: Yes, he was. I think he was very excellent in his line of work.
- Day: How about Wolf Berger?⁴³ When did you meet Wolf?
- Parker: Wolf was a student.
- Day: Yes.
- Parker: In our department, too. So I knew him right from the beginning of his visitation there. Wolf, and a whole bunch of them—Harris Stewart,⁴⁴ Bob Lankford⁴⁵—Jack Bradshaw⁴⁶ wasn't a student, he was in our laboratory for many years.

⁴¹ Oceanography 111, Submarine Geology.

⁴² William Rex Riedel (b1927) Australian micropaleontologist who arrived at SIO in 1956 as an assistant research geologist and retired as a research geologist in 1991.

⁴³ Wolfgang Helmut Berger (b1937), micropaleontologist born in Germany. Berger got his doctoral degree at SIO in 1968 working under Phleger. He was an SIO assistant research oceanographer until 1970. Berger joined the faculty of SIO in 1971, directed the Geosciences Research Division and was appointed interim director of SIO in 1996.

- Day: Who were the scientists at Scripps that you respected the most?
- Parker: I didn't know enough about the work of a lot of the people there. Fred's work was very good, I think. But it was not in a line that I was especially interested in—marshes. I'm trying to think. I really wasn't involved with many people's scientific work.
- Day: Did you know Hubbs,⁴⁷ for instance? Of course, he was an ichthyologist.
- Parker: I didn't like Hubbs.
- Day: You didn't like Hubbs?
- Parker: I thought he was kind of a stinker.
- Day: Why is that?
- Parker: Well, here's an example of what he'd do. A girl would come up to him when they were on a field trip and say, "Oh, look, you must come and look at this, blah, blah, blah." And he'd pay no attention. And later on he'd find it. I mean he wanted to be the Lord High Executioner. And Laura,⁴⁸ as far as I was concerned, was a pain in the neck.
- Day: Laura was?
- Parker: Well, she was so mean to secretaries. Do you remember Phyrne Russell?⁴⁹
- Day: Oh, yes.
- Parker: In the first place, she got the most unattractive secretaries she could find, on account of Hubbs. I needn't go into that, that's all. And she was so mean to them. For instance we always went to the Christmas party and she wouldn't let Phyrne go; she had to do something or other, until somebody came around and said, "Where's Phyrne Russell?" Laura had to back down. She was kind of a mean woman. A lot of people don't agree with me, so maybe she wasn't.
- Day: How about ZoBell?⁵⁰ Did you know him?

⁴⁴ Harris Bates Stewart (b1922) marine geologist. Stewart got his doctorate at SIO in 1956 under Francis P. Shepard, served as navy hydrographer, chief oceanographer of USGS and laboratory director at NOAA.

⁴⁵ Robert Renninger Lankford (b1925), graduate research geologist in the Foraminifera Lab starting in 1956.

⁴⁶ John Stratlii Bradshaw (b1927), biological oceanographer, research biologist at SIO 1958-1967 and professor of biology at UCSD 1967-.

⁴⁷ Carl Leavitt Hubbs (1894-1979), ichthyologist and SIO professor of biology 1944-1969.

⁴⁸ Laura Clark Hubbs (1893-1988), wife, colleague and co-author with her husband Carl Leavitt Hubbs. Although she was not formally employed by SIO, she worked daily with her husband in the laboratory.

⁴⁹ Phyrne S. Russell was employed as an assistant in the Fish Laboratory at SIO.

- Parker: He pierced my ears.
- Day: He pierced your ears! How? When?
- Parker: I thought he being a microbiologist he'd be a good one to pierce ears. He did a very good job of it, very antiseptic. He did it with some kind of a needle or something, I forget what he did it with, and he gave me a piece of platinum to put through each ear. I had to give the platinum back when they healed up.
- Day: When was this?
- Parker: Oh, gosh, when was it? It was in the first five years that I was there, somewhere along the line. I don't remember exactly when. A lot of other people, he pierced their ears, too. I wasn't the only one.
- Day: How interesting. How about Walter Munk?⁵¹ You must have known Walter.
- Parker: Oh, yes. I played a trick on Walter Munk. Walter was up on the same floor where we were, in Old Scripps Building, and Bob Arthur⁵²—I went to Bob Arthur's party that they had when he retired, and everybody got up and said something, so I got up and said, "We had a terrible time with Walter Munk when he was in Old Scripps Building, because he would use the women's john and the women didn't like it, and we never had any trouble like that with Bob Arthur." This was a big hit. Because Bob would never dream of doing such a thing.
- Day: Right.
- Parker: I'm very fond of Bob Arthur; he was fine. I liked Munk, too, but I always preferred Bob to Walter. I remember the first week I was at Scripps he had Jean Hosmer, who went out with Fred and me. Anyway, [Walter Munk] had us over and gave us the once-over right away, over in his cottage. That was when he was married to Martha. He was—I was not his type. I always got along with Walter, I was never very much involved with him. I guess he was a wonderful scientist.
- Day: Of course, he's a geophysicist. There was much more expansion at Scripps at that point in geophysics and much less in biology. What kind of input did you have in those decisions?
- Parker: I never had any. Fred did, I think, but I didn't.

⁵⁰ Claude Ephraim ZoBell (1904-1989), marine microbiologist and professor of biology at SIO 1932-1972, known as the father of marine microbiology.

⁵¹ Walter Heinrich Munk (b1917), geophysicist born in Austria. Arrived at SIO in 1939 as a student of Harald Sverdrup. Professor of geophysics at SIO 1947-1988 and founder of the Institute of Geophysics and Planetary Physics UCSD/SIO.

⁵² Robert Siple Arthur (1916-1995), physical oceanographer who got his Ph.D. at SIO in 1950 and served on the faculty 1951-1979.

- Day: Let me ask you who you think had the biggest influence on you as a scientist?
- Parker: Oh, gosh, that's a toughie. I don't really know. I suppose in a way Cushman did, but I didn't like a lot that he did in the way of scientific work. He was too facile about naming things, and he had someone working for him—Ruth Todd went down to the Survey, or at least went down to Washington after he died. She went and worked for him after I left. She thought he was absolutely God, and I never did. Everything he said was right and she did a number of wrong things for a long time because he was so sure that they were right. But, I don't know. I don't think anybody did really.
- Day: Were there taxonomists that you particularly admired?
- Parker: I liked Bill Riedel's approach to taxonomy, and I liked the approach to taxonomy of a man I knew down in Washington, but I just shared a laboratory with him down there; I was doing some work in Washington. I can't remember that there was anybody who had any particular effect on me, really. I mean, some I admired and some I didn't. But I don't think they had any particular effect on what I did.
- Day: You just went your own way?
- Parker: Yes. I went my own way and did what I wanted to do. It was very nice. I was lucky. We could get money easily then but you can't do that any more.
- Day: Did you have to write reports?
- Parker: Oh, yes. I wrote reports and handed them to Fred and he included them with his report. He was the boss in the laboratory, Fred was. I didn't say he was my boss, but he was the boss in the laboratory. He didn't tell me what to do.
- Day: Well, thank you very much.
- Parker: I can't really think who affected me particularly. I admired certain people. I admired Bramlette very much because of his integrity. But I don't really know much about his taxonomy. I liked the approach of various people that I knew, but I don't remember being influenced especially by anybody.
- Day: Did you know any other women scientists along the way?
- Parker: I knew some down in Washington. Yes, I knew one or two in Washington and some down in Houston. Miss Ellisor⁵³ and another one whose name I can't remember. They were the old battle-axes of scientists in oil company work.
- Day: But you didn't belong to any groups particularly?

⁵³ Alva C. Ellisor, paleontologist for Humble Oil and Refining Company in Houston, Texas from 1921.

- Parker: I didn't, no. The stuff we were doing down in Houston was all so brand new that I really couldn't say I was mixed up with anybody, really. I didn't care much for the boss of the lab that I was in. He let me do what I wanted to so that was all right, too. If they leave me alone and let me do what I want to, I can get along with anybody.
- Day: What do you feel would be the big impact of your work? The greatest impact of the work on forams? Do you think there was a great influence on the petroleum industry?
- Parker: My work? I don't know. I don't think so. I mean there were a whole group of us—this guy that I worked for down in Shell. They were going along on a new line of approach to ecology, and I went along with them. I don't think I was—I went along with the new approach to ecology and environmental studies and all that. I was right mixed up with that from the beginning practically, and that fascinated me. It did Fred, too.
- Day: Where did you pick that up?
- Parker: Shell.
- Day: That was Shell that was responsible for that.
- Parker: Yes, I would say so. That's where I got involved first with that kind of thing. With Cushman, it was pure taxonomy. Shell was just the beginning of the interest in ecology and so forth, in forams.
- Day: But that had been their philosophy before you came in '43? Before you arrived in Houston, they were already working on that line.
- Parker: That line when I was at Shell, yes. So when I came to Scripps I was interested in both, really. I was interested in taxonomy and I was interested in the ecology, whereas Fred was not particularly interested in the foraminifera, he was interested in the ecology. And that's where I was very useful to him. The papers we did together, I always did the taxonomy. He was ambitious, I was not. This makes a difference.
- Day: How did you write those papers together? Would you draft them or did he draft them?
- Parker: I did my part and he did his part. Then he took over.
- Day: He would put the two parts together then.
- Parker: Yes, the taxonomy's always separate in a paper anyway. I'm trying to think if I did anything except taxonomy with him. Yes, I was the chief author of a paper on

Texas coast, down in the coast of Texas, south Texas. I can't think of the name of the paper now.⁵⁴ That was taxonomy and ecology and everything. I had my finger in all that. Fred put me down as the chief author. We really were about equal, par with each other on that. Which was about time he did. [laughter]

Day: Have you enjoyed California all these years?

Parker: Very much, yes.

Day: Did you ever think of going back to Boston or had your family at that time dispersed?

Parker: I didn't want to go back there to live. It's too damn cold. I used to go back to the Cape every two or three years, because we were all crazy about our place down there.

Day: Do you still have that?

Parker: Oh, yes, it's a family thing now. It's a trust. My grandfather left the island to his children. My mother and her three brothers. All the families were very much involved with it down there, and involved with the mainland. Several of them have built houses on the mainland, to retire to. There's quite a little collection of family down there now.

Day: These are the nieces and nephews who visited you recently. When I was going to see you last week you said that your nephew or your niece was coming to visit.

Parker: Yes, they live on the Cape. They live near the island on the mainland. The island is not a winter resort. In fact, it's impossible in winter: no heat, electricity, so forth and so on, primitive plumbing.

Day: So these are Grace's children?

Parker: No, they never were very interested in the island. They're my niece—my brother's children. He was married twice and his daughter by the first marriage has a whole flock of children and they are all crazy about the island.

Day: So do you have a house there? Do you visit them or do you also have a house there?

Parker: Yes, we had a big house on the island. There are several houses on the island, four or five, mostly cottages but there's one quite big house that my niece has taken

⁵⁴Frances L. Parker, Fred B. Phleger, and Jean F. Peirson, *Ecology of Foraminifera from San Antonio Bay and Environs, Southwest Texas*. Cushman Foundation for Foraminiferal Research Special Publication no.2 (Washington: Cushman Foundation for Foraminiferal Research, 1953).

over. And then there are all these people on the mainland right near by, so it's fun to go back there. But I couldn't go back now, I couldn't manage.

Day: It's a long way to go.

Parker: It isn't that, but I couldn't live in the new house on the island. It's called the new house—it's a hundred years old. There's an old house on the island, too, that's older. I can't go up stairs, there's stairs in the new house. I couldn't live there at all, so I didn't want to go back. I couldn't do anything anyway. I had a blister on the bottom of my foot.

Day: Thank you very much.

Parker: You're very welcome. I hope this will be any use to you.

Day: Yes! It's wonderful. ##

TAPE GUIDE

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Tape 1, Side B

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Parker: Bramlette was quite a guy. He was a very excellent scientist. I'm told that Jerry Winterer⁴⁰ wants to come and talk to me about Bramlette. He has to write up something about him. He was the most honest scientific person—what's the word that I want?

Day: Integrity?

Parker: Integrity, yes. He never would admit to anything unless he was absolutely sure. But he didn't get along with people too well. He was always sort of furious because he didn't have more students to work with him. They didn't want to ask students; he didn't want to teach. He was in some ways a difficult person. He never stopped smoking. He died of emphysema in the end. That was what was wrong with him.

Day: He was very slender, right?

Parker: Yes, he was slim, and temperamental in some ways. I always got along with him very well.

Day: What about Fran Shepard?

Parker: Oh, I got along fine with Fran. Oh, I think he got kind of mad at me towards the end of his life because I was kidding him so much about his weather stuff that he was fussing with. That was kind of a waste of time. Fran Shepard, I think, was a very good descriptive scientist. I don't think he was a very original one. I don't want to be quoted on this though.

Day: That's all right.

Parker: Is that on the tape?

Day: Yes. I can restrict it for a period of time, if you like.

Parker: I didn't want to say anything. Fred and I took his course.⁴¹ We nearly died of boredom. We both thought it was a good idea if we did [take the course], so we did. Fran was not a good teacher. Fred was an excellent teacher. Fran may have been a better scientist. I don't know whether he was or not. He never did much original work. It was mostly descriptive work he did.

Day: How about Bill Riedel?⁴² Did you meet him when he first came?

⁴⁰ Edward L. "Jerry" Winterer (b 1925), studied with Bramlette at UCLA and became professor of geology at SIO.

⁴¹ Oceanography 111, Submarine Geology.

⁴² William Rex Riedel (b1927) Australian micropaleontologist who arrived at SIO in 1956 as an assistant research geologist and retired as a research geologist in 1991.

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Interviews conducted by
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INTERVIEW HISTORY

Frances Lawrence Parker came to the Scripps Institution of Oceanography in 1950 and founded the Marine Foraminifera Laboratory at Scripps with Fred B. Phleger. This made her one of a very small number of women scientists at SIO at that time.

Parker was born in Brookline, Massachusetts on March 28, 1906, the daughter of Philip Stanley Parker, a judge, and Eleanor Payson Parker. She received an A.B. degree from Vassar College in 1928 with a major in geology and a minor in chemistry. While at Vassar College she went on two geological field trips in 1926 and 1928 to Wyoming with geologist Thomas McDougall Hills. Parker received an M.S. in geology from the Massachusetts Institute of Technology in 1930.

While at MIT, Parker took a course with Joseph Cushman, the preeminent micropaleontologist, and became his research assistant at the Cushman Laboratory in Sharon, Massachusetts. Cushman studied foraminifera with funding from the U.S. Geological Survey. Parker took and passed the USGS examination, and was appointed assistant scientist (paleontologist) and her salary at the Cushman Laboratory was paid by the Survey. In 1932, Cushman and Parker traveled to central Europe where they examined type specimens and visited scientists, museums, and laboratories engaged in research on micropaleontology. They published sixteen papers together between 1930 and 1940.

Parker spent summers between 1936 and 1940 doing research at the Woods Hole Oceanographic Institution, where she shared a laboratory with Fred B. Phleger. From 1940 to 1943, Parker worked as academic secretary at Foxcroft School, an exclusive girls' school in Middleburg, Virginia. In 1943, she received several offers to work as a scientist in the petroleum industry and accepted a position as senior paleontologist at Shell Oil Company in Houston, Texas. Parker recalls that her interest in ecology began in Houston, and that the Shell Oil Company group with which she worked broadened her interests from foraminifera taxonomy to the application of the tools of micropaleontology to studies of the environment.

There is a natural connection between foraminifera research and the petroleum industry. Foraminifera are microscopic marine protozoa that secrete a calcareous or arenaceous shell. They live in all marine environments and are both planktonic and benthonic, and upon death the shells accumulate in sediments on the ocean bottom. Scientists use these remains as a record, which enables them to learn about marine environments over a long timescale. Petroleum is generated by heating organic matter deposited within marine sediments. Foraminifera in the layers above and below these layers help constrain the age of source rocks rich in organic matter, and foraminifera within the source rocks indicate the environment of deposition. This information helps in exploring for undiscovered petroleum deposits. Consequently petroleum companies have long been interested in and have supported work in this field.

Parker left Shell Oil Company in 1945 when she became ill with tuberculosis. While recuperating in Boston in 1947, she received a job offer from Fred Phleger who was on the faculty of Amherst College and spent summers at WHOI. He had a small research grant from WHOI, and Parker joined him to undertake work on the taxonomy of Atlantic foraminifera. Phleger and Parker worked together at Amherst College and continued at WHOI in 1949. While most of Parker's earlier work was on benthic foraminifera of the Atlantic, she published a series of studies on

foraminifera from the Gulf of Mexico beginning in 1950. She also did important work on micropaleontology of the Mediterranean working from deep-sea cores collected during the Swedish Deep Sea Expedition.

Phleger, a native Californian, decided to move west in 1950. The Scripps Institution of Oceanography in La Jolla, California offered positions to Phleger and Parker, and in 1950 they established the Marine Foraminifera Laboratory at SIO. The laboratory was initially supported by grant funds from the American Petroleum Institute, but later was substantially funded by the Office of Naval Research and the National Science Foundation.

Parker was appointed associate in marine geology at SIO in December 1950. Her job title was changed to junior research geologist in April 1952 and to assistant research geologist in July 1952. She took a leave of absence in December 1953, and returned to SIO a year later. She was advanced to associate research geologist in 1960, and to research paleontologist in 1967. Parker retired from SIO in July 1973, but continued to work as a non-salaried research associate for another decade.

Parker's years at SIO were prolific. She published over thirty papers as author and co-author with Phleger and other SIO colleagues, and she edited the *Contributions from the Cushman Foundation for Foraminiferal Research* from 1956-1963. Parker conducted research on all aspects of foraminifera: taxonomy, stratigraphy, biogeography, ecology, sedimentology, and paleoenvironment. Many of her publications on benthic and planktonic foraminifera are regarded as classics. Her work on planktonic foraminifera, which began in 1960, is judged particularly important. She developed a new high-level classification, down to the genus level, based on the presence and absence of spines on the shells of the planktonic foraminifera. Her approach to taxonomy is now generally accepted as the basis of classification for all Cenozoic planktonic foraminifera. Her work on foraminifera stratigraphy was important to the Deep Sea Drilling Project (DSDP), an NSF project headquartered at SIO from 1966-1986 which collected cores of ocean bottom sediments around the world. Parker went to sea only once, on a cruise of the DSDP drilling vessel *Glomar Challenger* late in her career.

Frances Parker was honored as a pioneer of modern micropaleontology when she received the Joseph A. Cushman Award for Outstanding Achievement in Foraminiferal Research in 1981. She was an honorary director and fellow of the Cushman Foundation for Foraminiferal Research. The U.S. Geological Survey named a bank on the Louisiana Shelf in the Gulf of Mexico the Parker Bank in her honor in 1976 (the Phleger Bank is nearby). In 1999, she established the Frances Parker Program in Public Education in the Earth Sciences at SIO.

This interview was conducted at Frances Parker's small apartment at the Chateau La Jolla, a residential retirement community in La Jolla, California, at 10 a.m. on November 15, 1999. We had met on several occasions at the Scripps Institution of Oceanography in the past, but we had never talked in depth about her career. Miss Parker promised me an hour when I made the appointment for the interview, and she warned me that she was ninety-three years old and might get tired. I found her seated in a comfortable overstuffed armchair surrounded by spoken books. An unreliable leg kept her off her feet, but her only complaint was that her sight was no longer strong enough to permit her to read. Her voice was strong and her memory was excellent. We talked for an hour and a half. A British micropaleontologist arrived for a visit just as I left.

The interview covered Miss Parker's life in chronological order. I prepared for the interview by examining the Frances Lawrence Parker Papers, a small collection at the Archives of the Scripps Institution of Oceanography. I also read several of her most important scientific papers and discussed her career with Wolfgang Berger, Susan Burke and several others at the Scripps Institution of Oceanography. Miss Parker did not review or edit the interview transcript, although she listened to the tape recording and asked me to correct two errors. She later confirmed several names that she did not recall during the interview.

This interview is one of a number of interviews with Scripps scientists that form the SIO Centennial Oral History Project. The project is supported from funds provided by Wolfgang Berger of the SIO Director's Office. I wish to express my thanks to Wolf Berger for his support and to Elizabeth N. Shor who transcribed the interview.

Deborah Cozort Day
Archivist SIO/UCSD
March 28, 2000

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INTERVIEW: 15 NOVEMBER 1999

Day: ##¹ I know you were born in Brookline, [Massachusetts].

Parker: Born in Brookline.

Day: March 28, 1906.

Parker: We were about a hundred yards from Boston.

Day: I've been there. Was your family from Brookline?

Parker: No, they really were not. My father was born in Boston, and my mother was born in Belmont, I think. I'm not sure—from that area, same general area.

Day: Were they educated in science, your parents?

Parker: No, my father was a lawyer and a judge. My mother—I think she went to a kindergarten-training course in town, and worked before she was married, when she was very young.

Day: What was her name?

Parker: Eleanor Payson.

Day: That was her maiden name?

Parker: Yes.

Day: And your father's name?

Parker: Parker. Philip S. Parker.

Day: I remember you told me you used to vacation in—.

Parker: Could you speak a little louder? I'm a little bit deaf.

Day: Okay. I know you used to vacation in Maine.

Parker: In Maine? No, Cape Cod. My family on my mother's side—my grandfather² bought an island down there, down on Cape Cod near Chatham. It's on that picture over there. [gesturing to a large framed print on the wall beside her]

Day: What was the name of the island?

¹ The symbol ## indicates that a section of tape has begun or ended.

² Gilbert Russell Payson

- Parker: Pochet Island.
- Day: Pochet.
- Parker: Yes, it doesn't look like an island there. It's surrounded—there's a bar that goes out to the left. See that dark patch down toward the left side?
- Day: I do indeed.
- Parker: That's the island. Marsh and suchlike things don't count as land, so if you're surrounded by marsh, you're an island.
- Day: And why did they buy it? For vacations?
- Parker: He wanted to take his boys down there and take them shooting and teach them to do outdoor things of the kind that you do in a place like that. First he bought an island south of Hyannis, and it was too civilized for him, so he got rid of that and bought this other one.
- Day: I see. And how many children were there in your parents' family?
- Parker: You mean in my—.
- Day: Your siblings, brothers and sisters.
- Parker: I have three, two sisters and a brother.³
- Day: And were you the eldest?
- Parker: No, I'm the youngest.
- Day: Aha. Did you always plan to go to college?
- Parker: I did. I took the college course in school. I didn't think about it very deeply. I always planned to be a librarian.
- Day: Did you really?
- Parker: Yes. Do you want to hear the story of that?
- Day: Yes, I would.
- Parker: My senior year at Vassar College—I majored in geology all through college and I suddenly thought, I don't have to be a librarian. I can be a geologist. It just

³ Grace Hamilton Parker Luquer, Eleanor Gilbert Parker, and Philip Stanley Parker, Jr.

suddenly hit me like a storm that I needed to be a geologist so I quickly changed, dropped all the geology that I was taking and took nothing but English my senior year.

Day: That's great.

Parker: It's funny though.

Day: Where did you go to high school?

Parker: I went to a private school in Boston called the Brimmer and May School,⁴ called the May School. It's now combined with another one, so it doesn't exist.

Day: What made you decide to go to Vassar?

Parker: Partly because my sister did. She liked it and I liked the sound of it.

Day: But your mother hadn't gone to it.

Parker: No, she didn't go.

Day: And what was your oldest sister's name?

Parker: Grace.

Day: Grace. Was she a scientist also?

Parker: No, she was interested in botany, but she was not a scientist and not an intellectual at all of any kind. She had a tough time getting through college, actually.

Day: Vassar was one of the few colleges in the United States then that offered good science courses for women.

Parker: It wasn't as good as I hoped it would be, but it was quite good in certain respects. It was very bad in paleontology. We had a teacher that was more of a philosopher than a teacher. He wanted to philosophize about paleontology rather than teach it.

Day: So who influenced you to study geology?

Parker: I don't know. I think I took the beginning course there. I had to take a beginning course in some science, the way you do in college. I think I liked it, so I went on with it. I think it was just because I liked it. I don't know who really interested me in it.

⁴ The May School and the Brimmer School merged in 1939 to form Brimmer and May School in Chestnut Hill, Massachusetts.

- Day: So you got your A.B. degree there in 1928.
- Parker: Yes.
- Day: That's right. And that's with a major in geology?
- Parker: Yes.
- Day: Did you have a minor?
- Parker: I minored in chemistry.
- Day: Well that's helpful. Were there any particular teachers there that you liked or were particularly influential?
- Parker: No, I wouldn't say so. The head of the department, I called on him. I'd gone on a field trip. Everybody who went on field trips with him called him "uncle" so he was "Uncle Tom."
- Day: Do you remember his last name?
- Parker: Hills?⁵
- Day: And where was your field trip?
- Parker: Wyoming.
- Day: Oh, you went to Wyoming?
- Parker: Yes, we went for six weeks, combined with Ohio State boys. Four or five boys from Ohio State and four or five girls from Vassar. It was great fun.
- Day: And what was the plan? What sort of fieldwork were you doing?
- Parker: It was mostly glacial geology, because that was what my boss was interested in. And he liked climbing mountains. So we climbed mountains and would do the geology from the top of the mountain, while looking over the landscape.
- Day: Was that your first trip to the west?
- Parker: Yes. I fell for it.
- Day: Did you?

⁵ Dr. Thomas McDougall Hills (b1881) was assistant professor of geology at Ohio State University from 1910-1920. He became professor of geology at Vassar College in 1920. *American Men of Science*, third edition (1927) lists his chief area of research as the glacial geology of Bitterroot Mountains, Montana.

- Parker: I certainly did.
- Day: I know the feeling.
- Parker: I was actually crazy about it.
- Day: You must have gone by train then.
- Parker: Yes.
- Day: So you saw a good amount of the countryside on the way.
- Parker: Not as good as I did in later years driving across, which I did several times.
- Day: Were you a great walker or mountain climber at that point?
- Parker: No, I wasn't. We didn't do rock climbing-type climbing, just ordinary climbing.
- Day: One of the interesting people who have been working on the history of geology is a professor from UCSD named Naomi Oreskes. She said that in geology one of the problems was that men resisted taking women on fieldwork, so I'm very interested in your trip to Wyoming. Were you treated equally with the young men from Ohio?
- Parker: [laughing] The young men packed the horses and did that work. We did the more domestic stuff, washing dishes and that sort of thing. But otherwise, we were treated equally. I don't know how you'd treat them unequally, exactly.
- Day: Well, the fact that you went, I think, is quite significant. What year was that? Do you happen to recall?
- Parker: Nineteen twenty-six. Then I went again in 1928, but that was after I graduated. They were going to take another trip, so I just went along for some of it.
- Day: Where did you go that time?
- Parker: Wyoming. Same place. Another girl and I did that. We worked as much as we felt like, played the rest of the time.
- Day: I want to go back to that question about being a librarian versus being a geologist. When did you make up your mind that you were going to be a geologist?
- Parker: It just seemed to hit me, I would say in the fall of my senior year. It just suddenly hit me I didn't need to be—. I always thought a librarian worked with books and read them and what not, and then I discovered that a librarian did cataloging and stuff like that and realized that it really wasn't my cup of tea. And geology was.

- Day: So at that point did you decide to go to graduate school, or did you think you'd get a job?
- Parker: I guess I did. I can't know at what point I decided. It was probably during that year.
- Day: Did you have an advisor at Vassar who was helping you make these decisions?
- Parker: I don't remember.
- Day: And what led you to select MIT?
- Parker: I was born in Brookline, as I told you. I was going to go to Harvard, and then I discovered that in those days Harvard didn't give the courses I needed. Vassar was very good in some respects, in other respects it was very poor, and I needed more undergraduate work. And Harvard wouldn't take me on for that, and MIT would, so I changed to MIT.
- Day: And what courses did you think you were poor at Vassar?
- Parker: Paleontology, maybe historical geology, I don't remember just what.
- Day: And who was your professor at MIT?
- Parker: Lindgren was the head of the department.⁶ He was a mineralogist, and at that time I thought I might be a mineralogist, too. But I discovered that women weren't welcome down in mines and it was pretty hard to be a mineralogist, or for a female to be.
- Day: And so—
- Parker: There was a man who specialized in what I was doing—at Scripps and later working with foraminifera—who had a private laboratory near Boston, and he took students from MIT for once a week or something for a course during the semester, and I went out and took this course, and then he offered me a job.
- Day: This was Joseph A. Cushman?⁷
- Parker: Cushman, yes. He offered me a job, and I was heading for a Ph.D. but I was terrified of the idea of the orals. I've always been very shy of speaking in public, for a reason in my childhood, which I won't bother to tell you—I suspect anyway.

⁶ Professor Waldemar Lindgren (1860-1939), Rogers Professor of Economic Geology at Massachusetts Institute of Technology from 1912 until his retirement. Lindgren was an eminent mineralogist.

⁷ Dr. Joseph Augustine Cushman (1881-1949), geologist in the U.S. Geological Survey 1913-22 and 1926 until his retirement. Cushman was founder and director of Cushman Laboratory for Foraminiferal Research in Sharon, Massachusetts in 1923. Foraminifera were his specialty.

He offered me this job, and I thought this is what I want to do and this would be more valuable than getting a Ph.D. in mineralogy or what have you. So I went and worked for him. I was at MIT for two years and then I went to work for him.

Day: I want to back up for a second and ask you what your impression was of Dr. Lindgren, such a famous person.

Parker: He was a very nice person. He wasn't in my line of business at all, anything I had any use for, in economic mineralogy-type stuff. He was a very fine teacher, I think, creative. He was quite old then, he was at the point of retiring.

Day: When did you first meet Joseph Cushman and what was your impression of him?

Parker: I met Cushman because they gave this course out at his laboratory and I decided to take the course, so I went out to his laboratory and of course met him.

Day: What was the name of that course?

Parker: Oh, I don't remember what the name of it was. It was to go out and work with him twice a week, something like that, learn something about foraminifera. I don't recall what the name of it was.

Day: And how old was he at that time? When you first met him.

Parker: Cushman? Oh, I'm not very good at ages. I would say fifty, sixty. That's as near as I could come.

Day: What kind of job did he offer you?

Parker: Oh, I picked forams, with a brush, and I did a lot of—I washed samples. It was a system where you float them in carbon tetrachloride, you put dry sand in carbon tetrachloride and the forams float to the top. I did a lot of that, down in a basement that had no air coming in, and nobody knew how dangerous carbon tetrachloride was at that time. How I'm still alive I don't know, but I lived through it. I mean a room just permeated with it, evaporating with these washed dishes.

Day: And this was in the Sharon, Massachusetts laboratory?

Parker: Yes.

Day: Can you describe the laboratory? Was this his home?

Parker: His home was there and [the laboratory was] behind his home. He was married for a second time to a woman who was quite well off, I think. And I don't know just when he had the laboratory built, but some time along the line he had this laboratory built behind the house. A little small cottage fitted out as a laboratory.

So he was really at home all the time. He made a lot of money, too. He was the first one who decided foraminifera were valuable economically, for the oil company people, for finding out where they were in this column and so on. That's how he got started with the Geological Survey. He was a member of the Geological Survey, and after I'd worked there for a year, I was, too—what they call a WAE, which is “when actually engaged,” I got paid. In other words I wasn't hired for any specific time. I just worked when I could, and I got paid. I worked regular hours out there at Cushman's and they paid me on the [U.S. Geological] Survey. I had to take a general exam, you know, the way you have to for the Survey. I was one of the top three. I was scared to death that I was going to get the job [as] secretary of geologic names or something like that, which didn't appeal to me at all. They say it is very bad if you refuse if they offer you the job, and I was scared to death they would. But they gave me a rating, so that depended on what I was paid, you see. So I went along as a member of the Survey. I went abroad with the Cushmans after I'd been there two years. I had a diplomatic passport because I was a member of the Survey.

Day: That was in 1933, is that correct?

Parker: Nineteen thirty-two.

Day: What was the purpose of that trip?

Parker: To go to museums and look at specimens, look at the types, and meet the people, and so forth. Very interesting. I didn't know anything. [Cushman] told me he'd take me if I'd take a course in secretarial, so I learned to type. I went to Bryant and Stratton for six weeks and learned to type and do shorthand, which I never used. Actually, I didn't use any typing, either. I was mostly picking forams and washing samples down in dark basements. It was a fun trip, though. I had a good time.

Day: Who were the most important people in foram research at that time? Was Cushman really preeminent?

Parker: He was it. He really was the one that started it. I don't know whether Vaughan⁸ was working then on forams or not.

Day: Not then, I don't think.

Parker: Not then. I think just Cushman though I wouldn't swear to it. There were some people down in Texas. I told you I was bad on names. Doris Malkin⁹ was one.

⁸ Dr. Thomas Wayland Vaughan (1870-1952), geologist in the U.S. Geological Survey 1894-1939, and director of the Scripps Institution of Oceanography 1924-1936. Vaughan was a Texan. His specialties included corals, larger foraminifera and marine sediments in addition to stratigraphy and paleontology of Tertiary formations of the southern and eastern states of the United States. Vaughan's work on larger foraminifera grew out of his 1908 field work in Florida and the Bahamas but his most important papers in this field were published in the 1930s and 1940s.

What was the name of the other one?¹⁰ There were two women down there, older than I, who were working for oil companies. It may not have started until Cushman started it, I don't really know. They did foram work for oil companies. The other one whose name I know perfectly well, but, as I say—I'm ninety-three and it's hit me in the name department.

Day: Well, I'm only asking you to remember back about seventy years, so I think you do quite well [laughter].

Parker: I can remember most things fairly well but I can't remember names.

Day: I will look them up.

Parker: Any kinds of streets or anything else.

Day: I was just curious if you were going to Europe if Dr. Cushman was meeting with European scientists there?

Parker: Yes, European scientists; we met all the people in the places where we went.

Day: You went to Germany, I know. Did you go to England also?

Parker: No. I went to England later but—we went to Germany, Czechoslovakia, Austria, and down as far as Budapest. There was a German university there, and a Czech university, and they didn't like each other, so we had to not let one know that we were dealing with the other. Kind of entertaining.

Day: And did you bring some specimens with you?

Parker: No. We got specimens over there. I mean I did some picking in samples over there. But we didn't take any there. We were looking mostly at type specimens in the museums.

Day: What did your parents think of this interesting career that you had picked?

Parker: They never paid much attention. They let me do what I wanted to do, and they never seemed to have any opinions about it. They thought it was all right, whatever I wanted to do was all right with them.

Day: That's great. So you worked with Cushman until 1940.

⁹ Doris Malkin Curtis (b1914), paleontologist and geologist at Shell Oil Company 1941-1950, University of Houston 1950-1952, Scripps Institution of Oceanography 1952-1954, and University of Oklahoma 1954-1979, and an officer of the Society for Economic Paleontology and Mineralogy (SEPM).

¹⁰ Miss Parker later referred to both Caroline Ella Heminway Kierstead (1904-1985), professor of geology at Smith College in Northampton, Massachusetts, and paleontologist at Shell Oil Company in Houston, Texas 1943-1945, and to Helen Nina Tappan Loeblich (b1917), who worked as geologist for the U. S. Geological Survey.

Parker: Right.

Day: What happened in 1940?

Parker: We both decided we were tired of each other being around. I think he had a girlfriend around at one point. [The Cushmans] were breaking up, and he decided he wanted to get rid of me, too, he didn't want me around. There never was any of that kind of thing with Cushman as far as I was concerned. I'd just been there ten years and I figured it was time to do something else. But it was the wrong time, because all the oil companies were getting rid of their lab people at that time and they weren't interested in having anybody. So I went as secretary in a girls' school for three years. Then the war came and all the oil companies wrote letters: What are you doing? I could have gotten a job anywhere I wanted at that point.

Day: You went to Shell Oil.

Parker: I went to Shell Oil in Houston.

Day: What was the girls' school you worked at?

Parker: It was down in Virginia. Middleburg, Virginia. A good school where they were interested in riding, and there was a great deal of hunting and so forth, but it was a good school academically. I did a little bit of teaching, but I was the academic secretary. Foxcroft.

Day: Was that a disappointment to you? Becoming a secretary after working in science.

Parker: No. I knew it was only temporary. I didn't mean it to be permanent.

Day: I think your first publication was in 1931. Is that correct?

Parker: No.

Day: No. When did you first start publishing?

Parker: I worked with Cushman. He took the foreign point of view. Anything you did with him he was the head of, so everything was Cushman and Parker. But I did a lot of work on one special genus. That would have been my Ph.D. thesis. I did all kinds of stuff for him.

Day: And when you collaborated on the papers. Who did most of the work?

Parker: I did. I did the work and he looked at it.

Day: And where did you publish these papers?

- Parker: Mostly he had a little publication he did himself, called *Contributions of the Cushman Laboratory for Foraminiferal Research*. That came out—I think it was quarterly. I don't remember. I may have sent one or two to *Journal of Paleontology*, but mostly it was in the *Contributions*.
- Day: Were there other people besides you working with Cushman in those years?
- Parker: Yes. There was a man from the Survey named Lloyd Henbest¹¹ who was there. He was working on large foraminifera. He was there for a year or two, I forget how long. Then students used to come out from Harvard and take courses. They'd come out once a week. They used to go part way out of Boston on the trolley and then I'd pick them up in my car and take them the rest of the way. Fred Phleger¹² was one of those.
- Day: Aha. That's the connection with Phleger.
- Parker: Yes, Fred Phleger was one of the students who went out there.
- Day: Great. Now let's go back to Houston for a second. You were in Houston for two years.
- Parker: I was in Houston for three years.¹³
- Day: Three years.
- Parker: I was going to leave [Foxcroft] after two years, but the headmistress—I mean the head of the academic part—was going to be away and she wanted me to stay and help steer the substitute. So I said I would if they'd raise my pay. I was paid a hundred dollars a month at that point, big deal.
- Day: And what was the name of the department head?
- Parker: Her name was Wellington and then she married before that time, and I can't remember what the name was. That's not important.
- Day: What were Shell Oil's interests?

¹¹ Lloyd George Henbest (b1900) geologist and paleontologist with U.S. Geological Survey, 1926-1930, a micropaleontologist who later became a director and president of the Cushman Foundation for Foraminiferal Research.

¹² Fred B. Phleger (1909-1993), micropaleontologist, grew up in southern California and got a Ph.D. from Harvard in 1936. Phleger served as Cushman's assistant in paleontology from 1934-1936. Phleger taught at Amherst College 1937-1949. During this period he and Frances Parker worked together at Amherst and summers at Woods Hole Oceanographic Institution. Phleger was appointed to the faculty of Scripps Institution of Oceanography in 1949 and persuaded Parker to join the Scripps staff in 1950. Phleger and Parker founded the Marine Foraminifera Laboratory at Scripps in 1950, although Phleger was officially listed as director. Phleger retired from SIO in 1977.

¹³ Frances Parker worked at Shell Oil Company from 1943 to 1945.

Parker: What?

Day: Shell Oil. Why were they interested in funding this group?

Parker: I wrote to a guy named Lalicker¹⁴ who had been at Harvard, too, and come out at Cushman's, and he was working in Houston. I said all of these companies want me and which one shall I go to? He recommended Shell. So I went to Shell. It didn't really make much difference which one I went to.

Day: Did you drive out to Houston?

Parker: I drove at forty-five miles an hour or whatever it was we were allowed to drive then, in my old Ford—and arrived in the middle of a hurricane.

Day: Really!

Parker: It was quite exciting because I hadn't planned where I was going to stay. You know a lot of the streets [in Houston] start and stop and pretty soon begin again. Well, I had to cope with that to find out where I was going to live. It was pure hell for the first year. I couldn't find any place to live. It was the beginning of the war, and I used to get up about five in the morning and go sit on doorsteps to see if I could be the first one there, looking in ads. The people I was staying with had three children under five years old, and I was expected to wash all the dishes and I couldn't wait to get out of that place. I finally did.

Day: And then, as the war ended, you went to Woods Hole.¹⁵ Is that the next thing you did?

Parker: When the war ended, the first thing I did was to go with a colleague, one of my superiors, Doris Malkin to find a hill. Had to go sixty miles from Houston to find a hill. It wasn't a very high one.

I went to Woods Hole first in 1936. That was in my Cushman year. They offered me a fellowship there, a summer fellowship or whatever they called it. I've forgotten what they called them. And I went for three summers, four summers, '36, '37, '38, '39—four summers. And that's where I worked with Fred Phleger. He was doing one thing and I was doing another. We shared a laboratory, and we had a nice messy one. At Cushman's you had to put everything away every night, leave it pristine. That's where I got involved with Fred.

Day: What was your appointment at Woods Hole? Were you a visiting researcher?

Parker: I forget what they called them. It was a sort of a summer fellowship. I don't remember what the name of it was.

¹⁴ Cecil Gordon Lalicker (b1907), paleontologist at the University of Oklahoma.

¹⁵ Woods Hole Oceanographic Institution, Woods Hole, Massachusetts.

Day: Were you working under Phleger?

Parker: No.

Day: Independently.

Parker: Oh, independently, yes. We worked on a few things together, but mostly not. Even after I went to work with him. That was another story. I left Houston because I had tuberculosis, and I went home. They offered me a teaching job down in Texas and I got my doctor to say that Texas was not a good climate for me—I mean Houston—so I didn't want to go back. So I was out for about two or three years. And then Fred was at Amherst and he wanted to get somebody—he didn't know very much about foraminifera, I mean he wasn't interested in the foraminifera. He was more interested in what he could do with them. I was interested in both. So he found that I was thinking about looking for a job and he offered me a job there. He said, "I can only pay you a hundred dollars a month, because that's all they were allowing from Woods Hole." He was getting the money from Woods Hole. I said, "Okay, I'll come and do it if you'll let me start an hour a day." So I went there and worked myself up from the TB business by working short hours and what not. What he wanted was somebody who would identify the foraminifera that he wanted to use in figuring out his stuff, his environmental stuff. So I did that.

Day: Now, you are really known for very broad ecological work with foraminifera. Can you talk about how you approached your work?

Parker: I approached it first from the taxonomic point of view, just identifying species and whatnot. I considered I had to do that before I could do anything else. I don't know whether you've heard about the API.

Day: The American Petroleum Institute.

Parker: That's how I was involved in it because Fred was interested in that, and so was Shepard.¹⁶

Day: Right.

Parker: After we'd been at Amherst for a year or so, Fred thought he'd go back to California, and I decided I'd go back, too. I was in the laboratory he started. He liked to direct things, and I liked to work.

¹⁶ Francis Parker Shepard (1897-1985), geologist known as the "father of marine geology." Shepard got his doctorate at the University of Chicago in 1922 and taught at the University of Illinois at Urbana 1922-1942. Shepard began working summers at the Scripps Institution of Oceanography in 1937 on marine geology and sedimentation and served on the Scripps faculty from 1942 until his retirement in 1964. Shepard published the first textbook in the field, *Submarine Geology*, in 1948. Shepard got grants from the Geology Society of America and the American Petroleum Institute beginning in 1937.

- Day: Just checking to make sure the machine is still running; I don't want to miss anything. Can I ask you first what Woods Hole was like in 1936? Was it fun there?
- Parker: Oh, it was more fun. I had the best time at Woods Hole. We worked, and we did a lot of playing, too. It was really a lot of fun because there were a lot of scientists there at the Oceanographic Institution, which was where I was. Generally known as WoHOI.
- Day: Did you know Columbus Iselin¹⁷ during those years?
- Parker: Oh, yes, I knew Columbus. He used to take his boat over to Martha's Vineyard. He lived over on Martha's Vineyard and then he'd come over in his boat every day. Boy, he was a handsome man. Bigelow¹⁸ was the head at that time of the Woods Hole Oceanographic Institution. He was the man at Harvard.
- Day: Right.
- Parker: I don't know, we just had an awfully good time there. I did.
- Day: Where did you live?
- Parker: I rented a room. I went back [to Woods Hole] after Fred and I were working there. I went back there in the summers again. Later on, in the forties, I got a cottage to live in.
- Day: Why did you and Phleger decide to move the Foraminifera Lab from Woods Hole to SIO?
- Parker: Why did we do what?
- Day: Why did you decide to go west?
- Parker: Why, I don't know. I was interested in what we were doing and I thought it was a dandy idea to go west. I was all for it.
- Day: You worked mostly with forams from the Atlantic at that point.
- Parker: Yes, that's right.

¹⁷ Columbus O'Donnell Iselin (1904-1971), physical oceanographer trained at Harvard under Henry Bryant Bigelow. Iselin was director of the Woods Hole Oceanographic Institution 1940-1950 and 1956-1958. He was an excellent sailor and commuted to WHOI daily from his home on Martha's Vineyard in a forty-foot launch.

¹⁸ Henry Bryant Bigelow (1879-1967), Harvard zoologist, student of Alexander Agassiz, and first director of the Woods Hole Oceanographic Institution 1930-1939. Bigelow served as President of the WHOI Board of Trustees from 1939-1952.

- Day: And you had not worked on Gulf forams or—.
- Parker: No. The project that Fred had was down in the Gulf of Mexico, so I'd been working on forams from the Gulf of Mexico.
- Day: While you were at Woods Hole?
- Parker: Very intensively, not while I was at Woods Hole, while I was at Amherst. At Woods Hole I did work on the Atlantic, mostly.
- Day: So how did it happen that the Foraminifera Lab moved to Scripps?
- Parker: Well, Fred was a Californian, and he thought it would be nice to go out to Scripps. He knew the Scripps people, and he knew Shepard and so forth and so I tagged along. I thought it would be fun. I never really thought of Fred as a boss, he was really more a colleague than a boss, but we did some papers together. Like the Europeans, he was the head author. I did the taxonomy and identification, he did all the other parts, where he used them to describe the environments and so forth and so on. And then I got interested in marsh stuff for a little while. Then he did, too, and then he said, "I think it would be much better if you worked on something else." He remarked this to me, and that suited me all right. Then I got into an entirely different line of stuff, for one thing he'd never done at all. Except that we'd been working on planktonic forams together.
- Day: So at that point did you move into planktonic foraminifera?
- Parker: I moved into planktonic forams, also stratigraphy, a lot of stuff. So I was going back in time, which was something he never did. He just worked on marshes.
- Day: How was the lab supported at SIO? Was it API?¹⁹
- Parker: Yes, we got money from the API, but the Navy—what did they call it? The Navy had all the money for research at that time at the end of the war. That was before the NSF²⁰ was invented. So we got ONR.²¹
- Day: ONR money.
- Parker: Yes. We never had any trouble getting money. That was one thing Fred was good at. I'd tell him what I wanted to do and so forth, and he'd write it up. I almost never did what I said I was going to, but that was all right.
- Day: He wrote the proposals then.

¹⁹ The American Petroleum Institute funded research in geology.

²⁰ The National Science Foundation was established in 1950 and replaced the Office of Naval Research as the major funder in the field of American oceanography within a decade.

²¹ The Office of Naval Research was created in 1946 and was a significant funder of oceanographic research.

- Parker: He wrote the proposals. He was really good at that, and I wasn't.
- Day: And was Roger Revelle²² helpful at this point?
- Parker: Not to me. He may have been to Fred, I don't know. Roger was very nice. He didn't have much to do with that, I don't think; I don't think he had anything to do with that.
- Day: And where was the lab located when you first came to Scripps? Was it in Ritter Hall?
- Parker: In Old Scripps.²³ First we had a room downstairs and then we moved upstairs. We had the room that Hubbs's library was in originally. Five of us in one room. I was having hot flashes, I never knew how I got anything done. It would get so damn hot in that room. They were building Sverdrup²⁴ at that point and there was the most awful racket going on outside. However, I was working on Mediterranean foraminifera at that point. I don't remember what Fred was doing. Marshes, probably.
- Day: And what kind of equipment did you have?
- Parker: My father gave me a microscope, and it was a good one.²⁵ Tell me the names of microscopes, I've forgotten the names of everything. I sold it to Susan Burke.²⁶
- Day: And what was that—a birthday present?
- Parker: Oh, I don't remember. My father just said he'd give me a microscope. So he did. It cost three hundred and something dollars.
- Day: Scripps didn't buy you the equipment you needed?
- Parker: Oh, yes, they did. Later on I got a new microscope. After about seven or eight years I got a new microscope. It was the same kind, very similar. I didn't need much equipment. Slides, and, you know, small stuff. Fred got to go on field trips. I didn't go very much on field trips.
- Day: Why is that?

²² Roger Randall Dougan Revelle (1909-1991), physical oceanographer and fourth director of the Scripps Institution of Oceanography, 1950-1961 and 1963-1964.

²³ George H. Scripps Memorial Marine Biological Laboratory, the first building constructed on the Scripps campus, commonly known as "Old Scripps."

²⁴ Sverdrup Hall, named for SIO's third director Harald Ulrik Sverdrup.

²⁵ According to Susan Burke, who bought the microscope, it was a 1938 Leitz.

²⁶ Susan K. Burke (b1949), staff research associate, Geosciences Research Division, Scripps Institution of Oceanography, has an M.S. degree from Hawaii and is a student of Johanna Resig. Burke specializes in benthic foraminifera. She was given Frances Parker's office after her retirement.

- Parker: I don't know. I really don't know. Finally, Fred said, "I think you ought to get to go on a field trip, get some money." And I was going on vacation. He said, "I think we ought to help you pay your vacation." So I did some field work on Cape Cod and also up at [Bowdoin],²⁷ Maine. I figured out a project that I could do from distance, got a colleague from Woods Hole to do collecting for me—periodical, seasonal collecting. Then there was a great Pooh-Bah when I came back. They wanted to know what the justification for this was. I was getting the money for going back east and so forth and so on. So I had to go through that, but that was all right.
- Day: Was that ONR money that paid for that?
- Parker: That was ONR, I guess. We were on the ONR when the NSF was born.
- Day: And was there a program officer at ONR who visited you?
- Parker: I don't remember. There may have been. There were program people. I think mostly they visited Fred and sometimes they'd visit me. I don't remember much about it.
- Day: Did you go to sea at all?
- Parker: No, I never went to sea until I went on the *Glomar Challenger*.²⁸ I didn't want to go for two months and sit on a well. I'd sat on wells down in Houston, so I went on a trip that they took east to try out a new piece of equipment. It was a two weeks' trip.
- Day: That was on the *Glomar Challenger*.
- Parker: That was on the *Glomar Challenger*. They tried out this equipment and then they went in to Boston harbor and dumped me very conveniently.
- Day: So you had no interest in going to sea?
- Parker: No. I'd had TB and I was a bit nervous about it, and also didn't sleep very well and I knew that—I didn't think I could stand it. They get you up at all hours, you know the watch hours and looking at samples and so forth. I didn't think I could stand that sort of existence at that point. I went home in 1955 and had a lung operation.
- Day: Did you really? For TB?

²⁷ The name could not be determined from the interview tape. Miss Parker thinks it may be Bowdoin.

²⁸ D/V *Glomar Challenger* was the drilling vessel of the Deep Sea Drilling Program, a federal research program operated by and at the Scripps Institution of Oceanography from 1966-1986. It drilled for cores of deep sea deposits which were analyzed by many geologists and micropaleontologists including Parker and Dr. William Riedel.

Parker: Yes.

Day: Where was that done? In Boston?

Parker: Boston. The man out here warned me. I was going to a man at the Rees-Stealy clinic. He was supposed to be the best tuberculosis man out here. He said "If I were you, I'd go and get a lung operation," he said, "the shadows come and go and we really don't know what's going on." So I said, "Okay, if my doctor in Boston okays it, I will." So I went back to Boston.

Day: And that was in '55?

Parker: Yes, '55.

Day: You know, Thomas Wayland Vaughan had TB also.

Parker: Did he really? I didn't know that.

Day: He picked it up when he was working in the Caribbean on coral.

Parker: I don't know where I picked it up. It's a mystery to me.

Day: Did you teach?

Parker: I taught for a little while when I was at the school in Foxcroft. I taught beginning algebra for a year, and I taught some English girls that had been practically English royalty, nobility, that sort of thing. And they didn't have anything suitable on the math line for them at Foxcroft, so I taught them how to keep a checkbook and a few other little useful things like that. I also taught a sort of course in beginning physiography. I made up a baby course and started going and looking at an old river going into an old brook, which I think was really good fun. Three of them: Lady—? I can't remember the name; and a friend of hers who came, too; some other girl. I didn't do any real teaching, I mostly was doing secretarial stuff. I only had a fight with one teacher the whole three years I was there, and I think that's damn good.

Day: What did you fight about?

Parker: I don't remember. I think she was having boils or something, and her temper was not of the best.

Day: But you never taught at Woods Hole, for instance? You didn't have seminars or anything like that?

- Parker: No. I've never been any good at that kind of thing. At Scripps I used to teach during one of the courses there, certain things about forams.²⁹
- Day: And which course was that? Was that the general oceanography course?
- Parker: A course that Fred had, or Shepard had, or something. General stuff.
- Day: And what was your first impression of Scripps, in California, when you first came here?
- Parker: Oh, I liked it very much.
- Day: Where did you live in La Jolla?
- Parker: When I first came I lived in the garage apartment at the Revelles.
- Day: Aha.
- Parker: That was just for a couple of weeks until I could find something. Then I found an apartment on Ravina Street behind a house. But eventually I got a little cottage right where 949—that great tall thing—is sitting now. I had a little cottage there. That was very nice. I lived there for five years. I went home for the operation, and then my sister came out and taught at Bishop's.³⁰
- Day: Is this Grace?
- Parker: No, this is Eleanor. My little sister. She came out and taught at Bishop's, so we lived together for the rest of the time.
- Day: Was she married?
- Parker: No.
- Day: She never married?
- Parker: No. My older sister was married. She was the only one of the three of us [who married]. ##
- Day: ## [Did your brother follow] in your father's footsteps. Was he a lawyer?

²⁹ Throughout the 1950s SIO offered two courses that dealt specifically with foraminifera: Oceanography 218, Marine Sediments, and Oceanography 219, Micropaleontology. The course catalogs of the period list several faculty members who taught Marine Sediments; one of these was Francis Shepard. Phleger is listed as the teacher for Micropaleontology. Frances Parker is not listed in the catalog as a teacher in any of the courses.

³⁰ The Bishop's School is a private high school in La Jolla, California that was founded with contributions from Ellen Browning Scripps and Eliza Virginia Scripps.

- Parker: He wasn't an intellectual at all. I mean he didn't have really many brains. He did various things. He was in the war, First World War, and he didn't get any farther than Camp Devens.³¹ He was a lieutenant. I mean he went to officers' school and got to be a lieutenant. Then he never really did much of anything. He helped run apartments and various things but he didn't—I don't know, he just didn't have the brains for that sort of thing. He never was an academic person at all.
- Day: So you're the only member of your family really who—.
- Parker: My sister Eleanor did, too.
- Day: She was the teacher at Bishop's?
- Parker: She was eventually a teacher at Bishop's. She had rather a checkered career. She started at the Deaconess School in New York and then she went to Teachers College at Columbia [University] and then she went abroad to Oxford for a year and she went to Harvard graduate school. Eventually she got a degree in some line, I don't know what.
- Day: Was she a scientist as well?
- Parker: No. She was an English teacher. She taught junior and senior English here at Bishop's.
- Day: Well, getting back to SIO, can you tell me how SIO differed from Woods Hole? Were they very different?
- Parker: Yes, they were very different, and the environment was so different, in a way. They were both small then and fun to be at. That was before they began to swell. Carl Eckart³² was the acting head when I went and then Roger came along.
- Day: Did you interact with Revelle and Eckart a lot?
- Parker: Did I what?
- Day: Did you see them a lot? Did you go to staff meetings every week?
- Parker: Yes, I think I did, more or less. I was pretty much on a par with other people. I wouldn't say the same of Nierenberg.³³ I don't think he knew I existed, and I'm sure I didn't care whether he existed or not, so that was all right. I was treated

³¹ Camp Devens was an Army training base near Boston, Massachusetts.

³² Carl Henry Eckart (1902-1973), physicist and first director of the Marine Physical Laboratory, served as director of the Scripps Institution of Oceanography 1948-1950 with Roger Revelle as assistant director.

³³ William Aaron Nierenberg (b1919), physicist and director of Scripps Institution of Oceanography 1965-1986.

pretty equally with the men as far as pay went, but I was never put on committees except ad hoc committees.³⁴

Day: Your appointment was as a research geologist, is that right?

Parker: I've forgotten how it goes there. I was a research paleontologist, I guess. I had an awful row with one of the secretaries once, because she said, "You can't be that." She insisted that I was paid as if I had a doctor's degree. She called me a doctor. I thought, I'm not a doctor. She said "You're paid like a doctor," and I said, "I sure am." That took care of that. I'd really done all the work for a doctor's degree, something that was equal to a thesis and heaven knows I'd published enough stuff since. I never took my oral exams; that was the only thing.

Day: You'll have to tell me why.

Parker: Why what?

Day: Why you wouldn't take the orals, why you were so worried about it.

Parker: Oh, I was busy. Oh, I think it dated back to my childhood. My music teacher—her teacher had a recital for pupils of her pupils, and I broke down in the middle of mine several times. The teacher was very nice about it, but my teacher was not nice about it at all. She would hardly speak to me afterwards. I was very much in the doghouse. I remember walking home with her, and she didn't say a word. I don't think that was very good for me. I know I never wanted to speak in public. I could if I read it. I remember breaking down at Vassar once or twice—just because one line went all astray. So I got sort of frightened of getting up in front of people and speaking. I was in some later on, but I had it neatly typed and read it.

Day: I was interested because Phleger had a faculty appointment.

Parker: He could talk about anything. He could get up and talk very well for an hour about nothing. He was trained in drama. He was into dramatics with Marge.³⁵

Day: And, of course, she was in with the La Jolla theater group.

Parker: Well, not really. They were very much interested in it. I used to go to those every week. There was a bunch of us who used to go every week to those plays. Carl and Roger's family and some other people, I don't know. A bunch of us used to

³⁴ SIO Staff Council committees included standing committees and ad hoc committees. Standing committees planned buildings, oversaw operations of the library, and undertook other ongoing work. Ad hoc committees were established by the director as needed to solve short term problems. Parker is not referring here to peer review committees that were appointed by the Faculty Senate.

³⁵ Margery Temple Phleger (1908-1986), wife of Fred B. Phleger, had a degree in theater arts. She was a founder of the La Jolla Playhouse, a theatrical company in La Jolla. The Phlegers both appeared in amateur theatrical productions.

go every month or week or whenever it was they had it changed. But Fred was just a born show-off, just a bit. He really was good at it.

Day: I'm asking you this because I wondered if there was a difference between women scientists at SIO and the men.

Parker: Well, I think there was a difference at the beginning anyway. I got the same money, I think, that the men did, but, as I say, I wasn't put on committees but the ad hoc committees. And I thought that was swell. I didn't want to be on committees anyway. I wanted to do my work. I don't think anybody really likes to be on committees. I told some female who was there about that later on, and she was horrified at it. I said I was elated not to be put on committees. I remember in Nierenberg's day, I really had no status at all, I don't think socially. I remember there was a party that I strictly wanted to go to, and I wasn't invited to it, and although men at my same level were invited, I was not. I was quite unknown. I probably could have done something about it if I'd made a fuss. I didn't like to make a fuss.

Day: There were a few women besides you at Scripps at that point.

Parker: I can't remember their names.

Day: Betty Boden.³⁶

Parker: Betty Boden. There was somebody before that. There was a girl in physical geology, physics I mean. She went off up north somewhere.

Day: Was that June Pattullo?³⁷

Parker: Might have been. Then there was another girl in the biology department whose name I also can't remember. Those were about all. Then Betty Boden came along. I think I was there before she was.

Day: I was wondering if you could tell me what your first impression of Roger Revelle was, and when you met him.

Parker: Roger? I met him almost immediately. I don't know. We all went out to dinner together, a whole bunch of us. Jean Hosmer³⁸ was secretary for Fred, assistant I should say, not secretary. We lived in that little garage apartment at the Revelles for a week or so, then she got out and I got out. I don't know. You just ran into Roger at meetings and all over the place. I never was really socially involved much with the Revelles. I've always know them. We would greet each other with open

³⁶ Elizabeth Maitland Kampa Boden (1922 -1986), marine biologist. She entered SIO in 1944 as a student of Carl Leavitt Hubbs and got her doctorate in 1950. She was a staff biologist at SIO 1954-1977.

³⁷ June G. Pattullo (b1921), physical oceanographer. She got her doctorate at SIO in 1957 under Walter Munk and joined the faculty of Oregon State University in 1960.

³⁸ Jean Peirson Hosmer, senior lab technician in the Foraminifera Laboratory.

arms and all that sort of thing. I didn't run in their social—I couldn't keep up a social life at work, too, and get over a lung operation all at the same time.

Day: What kind of hours were you putting in at the lab?

Parker: What?

Day: What kind of hours did you keep at your laboratory?

Parker: Well, theoretically from eight to five. That I did for a long time. Then I kind of lapsed and went from eight-thirty to four-thirty, but I made up for it afterwards because after I retired I worked for a long time without pay, doing the kind of work that nobody else could do, not research but other things. Taking care of samples, dealing with Bramlette's³⁹ library and various other things that nobody else could do. I enjoyed it. I liked being associated with it still after I retired. I didn't get paid. We had a hundred great big drawers in a room—I think there were about a hundred of these great big drawers full of samples. I went through all of them and threw away some and dealt with others and packed them up and sent them down to the core locker. All kinds of stuff like that.

Day: What did you think of Bramlette?

Parker: Bramlette was quite a guy. He was a very excellent scientist. I'm told that Jerry Winterer⁴⁰ wants to come and talk to me about Bramlette. He has to write up something about him. He was the most honest scientific person—what's the word that I want?

Day: Integrity?

Parker: Integrity, yes. He never would admit to anything unless he was absolutely sure. But he didn't get along with people too well. He was always sort of furious because he didn't have more students to work with him. They didn't want to ask students; he didn't want to teach. He was in some ways a difficult person. He never stopped smoking. He died of emphysema in the end. That was what was wrong with him.

Day: He was very slender, right?

Parker: Yes, he was slim, and temperamental in some ways. I always got along with him very well.

Day: What about Fran Shepard?

³⁹ Milton Nunn Bramlette (1896-1977), professor of geology at SIO 1951-1962.

⁴⁰ Edward L. "Jerry" Winterer (b 1925), studied with Bramlette at UCLA and became professor of geology at SIO.

- Parker: Oh, I got along fine with Fran. Oh, I think he got kind of mad at me towards the end of his life because I was kidding him so much about his weather stuff that he was fussing with. That was kind of a waste of time. Fran Shepard, I think, was a very good descriptive scientist. I don't think he was a very original one. I don't want to be quoted on this though.
- Day: That's all right.
- Parker: Is that on the tape?
- Day: Yes. I can restrict it for a period of time, if you like.
- Parker: I didn't want to say anything. Fred and I took his course.⁴¹ We nearly died of boredom. We both thought it was a good idea if we did [take the course], so we did. Fran was not a good teacher. Fred was an excellent teacher. Fran may have been a better scientist. I don't know whether he was or not. He never did much original work. It was mostly descriptive work he did.
- Day: How about Bill Riedel?⁴² Did you meet him when he first came?
- Parker: Oh, Bill Riedel was living in the house in front of me when I had my little cottage. He was boarding with a woman in front. He used to come down and eat with me, and he didn't have any money so he'd put what he could afford to put into the teapot and I would feed him. I've known Bill Riedel ever since he was here.
- Day: What did you think of him? He must have been a young student when you first met him, fresh from Australia.
- Parker: Yes, he was. I think he was very excellent in his line of work.
- Day: How about Wolf Berger?⁴³ When did you meet Wolf?
- Parker: Wolf was a student.
- Day: Yes.
- Parker: In our department, too. So I knew him right from the beginning of his visitation there. Wolf, and a whole bunch of them—Harris Stewart,⁴⁴ Bob Lankford⁴⁵—Jack Bradshaw⁴⁶ wasn't a student, he was in our laboratory for many years.

⁴¹ Oceanography 111, Submarine Geology.

⁴² William Rex Riedel (b1927) Australian micropaleontologist who arrived at SIO in 1956 as an assistant research geologist and retired as a research geologist in 1991.

⁴³ Wolfgang Helmut Berger (b1937), micropaleontologist born in Germany. Berger got his doctoral degree at SIO in 1968 working under Phleger. He was an SIO assistant research oceanographer until 1970. Berger joined the faculty of SIO in 1971, directed the Geosciences Research Division and was appointed interim director of SIO in 1996.

- Day: Who were the scientists at Scripps that you respected the most?
- Parker: I didn't know enough about the work of a lot of the people there. Fred's work was very good, I think. But it was not in a line that I was especially interested in—marshes. I'm trying to think. I really wasn't involved with many people's scientific work.
- Day: Did you know Hubbs,⁴⁷ for instance? Of course, he was an ichthyologist.
- Parker: I didn't like Hubbs.
- Day: You didn't like Hubbs?
- Parker: I thought he was kind of a stinker.
- Day: Why is that?
- Parker: Well, here's an example of what he'd do. A girl would come up to him when they were on a field trip and say, "Oh, look, you must come and look at this, blah, blah, blah." And he'd pay no attention. And later on he'd find it. I mean he wanted to be the Lord High Executioner. And Laura,⁴⁸ as far as I was concerned, was a pain in the neck.
- Day: Laura was?
- Parker: Well, she was so mean to secretaries. Do you remember Phyrne Russell?⁴⁹
- Day: Oh, yes.
- Parker: In the first place, she got the most unattractive secretaries she could find, on account of Hubbs. I needn't go into that, that's all. And she was so mean to them. For instance we always went to the Christmas party and she wouldn't let Phyrne go; she had to do something or other, until somebody came around and said, "Where's Phyrne Russell?" Laura had to back down. She was kind of a mean woman. A lot of people don't agree with me, so maybe she wasn't.
- Day: How about ZoBell?⁵⁰ Did you know him?

⁴⁴ Harris Bates Stewart (b1922) marine geologist. Stewart got his doctorate at SIO in 1956 under Francis P. Shepard, served as navy hydrographer, chief oceanographer of USGS and laboratory director at NOAA.

⁴⁵ Robert Renninger Lankford (b1925), graduate research geologist in the Foraminifera Lab starting in 1956.

⁴⁶ John Stratlii Bradshaw (b1927), biological oceanographer, research biologist at SIO 1958-1967 and professor of biology at UCSD 1967-.

⁴⁷ Carl Leavitt Hubbs (1894-1979), ichthyologist and SIO professor of biology 1944-1969.

⁴⁸ Laura Clark Hubbs (1893-1988), wife, colleague and co-author with her husband Carl Leavitt Hubbs. Although she was not formally employed by SIO, she worked daily with her husband in the laboratory.

⁴⁹ Phyrne S. Russell was employed as an assistant in the Fish Laboratory at SIO.

- Parker: He pierced my ears.
- Day: He pierced your ears! How? When?
- Parker: I thought he being a microbiologist he'd be a good one to pierce ears. He did a very good job of it, very antiseptic. He did it with some kind of a needle or something, I forget what he did it with, and he gave me a piece of platinum to put through each ear. I had to give the platinum back when they healed up.
- Day: When was this?
- Parker: Oh, gosh, when was it? It was in the first five years that I was there, somewhere along the line. I don't remember exactly when. A lot of other people, he pierced their ears, too. I wasn't the only one.
- Day: How interesting. How about Walter Munk?⁵¹ You must have known Walter.
- Parker: Oh, yes. I played a trick on Walter Munk. Walter was up on the same floor where we were, in Old Scripps Building, and Bob Arthur⁵²—I went to Bob Arthur's party that they had when he retired, and everybody got up and said something, so I got up and said, "We had a terrible time with Walter Munk when he was in Old Scripps Building, because he would use the women's john and the women didn't like it, and we never had any trouble like that with Bob Arthur." This was a big hit. Because Bob would never dream of doing such a thing.
- Day: Right.
- Parker: I'm very fond of Bob Arthur; he was fine. I liked Munk, too, but I always preferred Bob to Walter. I remember the first week I was at Scripps he had Jean Hosmer, who went out with Fred and me. Anyway, [Walter Munk] had us over and gave us the once-over right away, over in his cottage. That was when he was married to Martha. He was—I was not his type. I always got along with Walter, I was never very much involved with him. I guess he was a wonderful scientist.
- Day: Of course, he's a geophysicist. There was much more expansion at Scripps at that point in geophysics and much less in biology. What kind of input did you have in those decisions?
- Parker: I never had any. Fred did, I think, but I didn't.

⁵⁰ Claude Ephraim ZoBell (1904-1989), marine microbiologist and professor of biology at SIO 1932-1972, known as the father of marine microbiology.

⁵¹ Walter Heinrich Munk (b1917), geophysicist born in Austria. Arrived at SIO in 1939 as a student of Harald Sverdrup. Professor of geophysics at SIO 1947-1988 and founder of the Institute of Geophysics and Planetary Physics UCSD/SIO.

⁵² Robert Siple Arthur (1916-1995), physical oceanographer who got his Ph.D. at SIO in 1950 and served on the faculty 1951-1979.

- Day: Let me ask you who you think had the biggest influence on you as a scientist?
- Parker: Oh, gosh, that's a toughie. I don't really know. I suppose in a way Cushman did, but I didn't like a lot that he did in the way of scientific work. He was too facile about naming things, and he had someone working for him—Ruth Todd went down to the Survey, or at least went down to Washington after he died. She went and worked for him after I left. She thought he was absolutely God, and I never did. Everything he said was right and she did a number of wrong things for a long time because he was so sure that they were right. But, I don't know. I don't think anybody did really.
- Day: Were there taxonomists that you particularly admired?
- Parker: I liked Bill Riedel's approach to taxonomy, and I liked the approach to taxonomy of a man I knew down in Washington, but I just shared a laboratory with him down there; I was doing some work in Washington. I can't remember that there was anybody who had any particular effect on me, really. I mean, some I admired and some I didn't. But I don't think they had any particular effect on what I did.
- Day: You just went your own way?
- Parker: Yes. I went my own way and did what I wanted to do. It was very nice. I was lucky. We could get money easily then but you can't do that any more.
- Day: Did you have to write reports?
- Parker: Oh, yes. I wrote reports and handed them to Fred and he included them with his report. He was the boss in the laboratory, Fred was. I didn't say he was my boss, but he was the boss in the laboratory. He didn't tell me what to do.
- Day: Well, thank you very much.
- Parker: I can't really think who affected me particularly. I admired certain people. I admired Bramlette very much because of his integrity. But I don't really know much about his taxonomy. I liked the approach of various people that I knew, but I don't remember being influenced especially by anybody.
- Day: Did you know any other women scientists along the way?
- Parker: I knew some down in Washington. Yes, I knew one or two in Washington and some down in Houston. Miss Ellisor⁵³ and another one whose name I can't remember. They were the old battle-axes of scientists in oil company work.
- Day: But you didn't belong to any groups particularly?

⁵³ Alva C. Ellisor, paleontologist for Humble Oil and Refining Company in Houston, Texas from 1921.

- Parker: I didn't, no. The stuff we were doing down in Houston was all so brand new that I really couldn't say I was mixed up with anybody, really. I didn't care much for the boss of the lab that I was in. He let me do what I wanted to so that was all right, too. If they leave me alone and let me do what I want to, I can get along with anybody.
- Day: What do you feel would be the big impact of your work? The greatest impact of the work on forams? Do you think there was a great influence on the petroleum industry?
- Parker: My work? I don't know. I don't think so. I mean there were a whole group of us—this guy that I worked for down in Shell. They were going along on a new line of approach to ecology, and I went along with them. I don't think I was—I went along with the new approach to ecology and environmental studies and all that. I was right mixed up with that from the beginning practically, and that fascinated me. It did Fred, too.
- Day: Where did you pick that up?
- Parker: Shell.
- Day: That was Shell that was responsible for that.
- Parker: Yes, I would say so. That's where I got involved first with that kind of thing. With Cushman, it was pure taxonomy. Shell was just the beginning of the interest in ecology and so forth, in forams.
- Day: But that had been their philosophy before you came in '43? Before you arrived in Houston, they were already working on that line.
- Parker: That line when I was at Shell, yes. So when I came to Scripps I was interested in both, really. I was interested in taxonomy and I was interested in the ecology, whereas Fred was not particularly interested in the foraminifera, he was interested in the ecology. And that's where I was very useful to him. The papers we did together, I always did the taxonomy. He was ambitious, I was not. This makes a difference.
- Day: How did you write those papers together? Would you draft them or did he draft them?
- Parker: I did my part and he did his part. Then he took over.
- Day: He would put the two parts together then.
- Parker: Yes, the taxonomy's always separate in a paper anyway. I'm trying to think if I did anything except taxonomy with him. Yes, I was the chief author of a paper on

Texas coast, down in the coast of Texas, south Texas. I can't think of the name of the paper now.⁵⁴ That was taxonomy and ecology and everything. I had my finger in all that. Fred put me down as the chief author. We really were about equal, par with each other on that. Which was about time he did. [laughter]

Day: Have you enjoyed California all these years?

Parker: Very much, yes.

Day: Did you ever think of going back to Boston or had your family at that time dispersed?

Parker: I didn't want to go back there to live. It's too damn cold. I used to go back to the Cape every two or three years, because we were all crazy about our place down there.

Day: Do you still have that?

Parker: Oh, yes, it's a family thing now. It's a trust. My grandfather left the island to his children. My mother and her three brothers. All the families were very much involved with it down there, and involved with the mainland. Several of them have built houses on the mainland, to retire to. There's quite a little collection of family down there now.

Day: These are the nieces and nephews who visited you recently. When I was going to see you last week you said that your nephew or your niece was coming to visit.

Parker: Yes, they live on the Cape. They live near the island on the mainland. The island is not a winter resort. In fact, it's impossible in winter: no heat, electricity, so forth and so on, primitive plumbing.

Day: So these are Grace's children?

Parker: No, they never were very interested in the island. They're my niece—my brother's children. He was married twice and his daughter by the first marriage has a whole flock of children and they are all crazy about the island.

Day: So do you have a house there? Do you visit them or do you also have a house there?

Parker: Yes, we had a big house on the island. There are several houses on the island, four or five, mostly cottages but there's one quite big house that my niece has taken

⁵⁴Frances L. Parker, Fred B. Phleger, and Jean F. Peirson, *Ecology of Foraminifera from San Antonio Bay and Environs, Southwest Texas*. Cushman Foundation for Foraminiferal Research Special Publication no.2 (Washington: Cushman Foundation for Foraminiferal Research, 1953).

over. And then there are all these people on the mainland right near by, so it's fun to go back there. But I couldn't go back now, I couldn't manage.

Day: It's a long way to go.

Parker: It isn't that, but I couldn't live in the new house on the island. It's called the new house—it's a hundred years old. There's an old house on the island, too, that's older. I can't go up stairs, there's stairs in the new house. I couldn't live there at all, so I didn't want to go back. I couldn't do anything anyway. I had a blister on the bottom of my foot.

Day: Thank you very much.

Parker: You're very welcome. I hope this will be any use to you.

Day: Yes! It's wonderful. ##

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Tape 1, Side B

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