RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

NEW BRUNSWICK

AN INTERVIEW WITH CHARLES W. MANGER

FOR THE

RUTGERS ORAL HISTORY ARCHIVES

WORLD WAR II * KOREAN WAR * VIETNAM WAR * COLD WAR

INTERVIEW CONDUCTED BY

SHAUN ILLINGWORTH
and
LISA CAMPBELL

TINTON FALLS, NEW JERSEY
MARCH 19, 2008

TRANSCRIPT BY

DOMINGO DUARTE

Shaun Illingworth: This begins an interview with Charles Manger on March 19, 2008, in Tinton Falls, New Jersey, at the Seabrook Village Community. This is Shaun Illingworth and …

Lisa Campbell: … Lisa Campbell.

SI: Also in attendance is …

Katherine Manger: Kathy Manger.

Charles Manger: Charles Manger.

SI: Thank you very much for having us here today, and thank you, Kathy, for all your work in arranging this. To begin, could you tell us where and when you were born?

CM: My birthplace was 56 Fifth Street in Newark, New Jersey, in the Roseville section. I was the third child of Charles Manger, my dad, and Martha, my mother. They had lived there for a number of years before I came. I'm not quite sure how long, but my dad was a police sergeant in Newark and his latest job, the last job, was acting desk lieutenant at the Fifth Precinct, which was about four or five blocks from where we lived [at Orange Avenue and Sixth Street]. So, I don't remember my early childhood, [laughter] but I did go to a grammar school, which was a public school, which was about two blocks from home. I could walk it easily, and I went there for the first, second and third grade, and then I was old enough to walk by myself, but, before that, I had to go with either my mother or father or a relative. … It was so convenient [that] it wasn't bad at all.

SI: Do you remember the name of the school?

CM: Oh, brother; I should. It was a Newark public school.

SI: Okay; Sussex Avenue School?

CM: Sussex Avenue? Yes, I guess it was Sussex Avenue, which was within a block of my home.

SI: What do you remember about the neighborhood and the people in it?

CM: Well, it was a completely built neighborhood for living, and the houses were next to each other, like, on one side was an alley, about four feet wide, then the next house, [laughter] things like that. … My dad owned the house and he had the first floor rented, and then, we lived on the second floor and there were several rooms on the third floor, so, we had the second and third floors. … My whole family lived there, including my brother and sister. Now, we did have a younger brother who passed away as a child. So, I grew up with my sister, who was the oldest, then my brother, and I was next. As far as school is concerned, I did go to Sussex Avenue School for the first three grades, but then I was old enough to walk by myself to St. Rose of Lima School, which was maybe as much as a mile away. So, I learned how to walk back and forth from there and we were taught by nuns. … Well, I finished the eighth grade there, and then I

went to St. Benedict's Prep School, which is on High Street [now Martin Luther King, Jr., Boulevard] in Newark, and there I finished the four years of prep school.

SI: What were some of your favorite subjects in school?

CM: Chemistry, yes, really, and that showed later on, where I became a senior research chemist with DuPont.

SI: What attracted you to chemistry?

CM: One Christmas, I got a chemistry set as a present and I liked that a lot, and I think it just sunk in, stayed with me. So, well, shall I bump up the year in school? In other words, I went to St. Benedict's Prep for four years and chemistry was one of my favorite subjects in the senior year. I had, essentially, zero guidance in where to go from there. I'm not sure whether my dad could afford college or not, but it turned out that I still had zero guidance. I finished Benedict's and, coincidentally, a block away from St. Benedict's School, on High Street in Newark, they opened up an art school. … Because I didn't have any other place lined up to go, I went to the art school, and it took me about three months to find out I'm not going to be an artist. [laughter] So, I quit that and got a job in the corner drugstore, which is about half a block from home. So, I was there for a year and I worked something like sixty hours a week, delivering prescriptions and being a soda jerk behind the soda fountain and [doing] other odds and ends. …

SI: Did your family always live in the home that you described earlier?

CM: Yes, yes. I'm not sure what happened after I left. So, I was in the art school and didn't get very far as an artist. So, I quit that and got a job in the pharmacy that I mentioned, on the corner. So, I worked there a year, something like sixty hours a week. I think I mentioned being a soda jerk and whatever. So, I was there a year and I earned five dollars a week, which, at that time, wasn't too bad, but I never got a raise. So, I talked to the pharmacist and he raised me to ten dollars a week, yet, still at sixty hours a week. So, I worked another year on that. I had registered with the Essex County employment office, which was in the Hall of Records on High Street. I told them my interest was chemistry, and so, after my first [second] year in the pharmacy, I got a call from the employment office in the Hall of Records. I went down to see them, and they had a job opening at DuPont Pigments Research Lab in Newark, and so, I called them up and I actually got the job. Coincidentally, the night that I started working with them, I started at Newark College of Engineering, [now part of New Jersey Institute of Technology]. [laughter] So, it was right at the beginning of the school year.

SI: How did you come to apply to Newark College of Engineering? You mentioned you had had little guidance beforehand.

CM: … Oh, I had started in Newark College of Engineering the night of the day that I started in the lab, with DuPont. So, that was the beginning of an evening college history which wound up as a master's of chemical engineering.

KM: Now, Dad, what made you go to NCE? It was close by? …

CM: It was convenient, yes. …

KM: And they offered not a chemistry major, but chemistry engineering.

CM: I had my dad's car, so, I could use the car. So, NCE was the closest. In fact, it couldn't be much closer. It was within walking distance. So, I went to NCE. It was four years. I actually got an associate's degree in chemical engineering.

SI: This was all during the Great Depression.

CM: Yes, in the '30s. …

SI: What do you remember about how the Great Depression affected your neighborhood or Newark in general?

CM: Well, no, what I should have had, actually, was some kind of guidance for going to college and, as I remember, I had zero. So, it was entirely up to me and I sort of lucked out.

KM: And I think, because my father's dad was in the police department …

CM: Police sergeant.

KM: It was a steady job, you know, for during the Depression. …

CM: Oh, yes. In retrospect, he put all his children [through school]; that would include my sister, who went to St. Vincent's Academy and she had a business course [that lasted] only two years, but he paid for that. Then, my brother went to St. Benedict's Prep also, the Class of 1925, and he stopped there and, for some reason or other, he didn't continue either. Well, then, I came along and I went through Benedict's, and then, the art school for a few months, but, then, I got the job with DuPont, which was in Newark, also, and I could either go there by bus or [car]. That was after I was eighteen and I was driving my dad's car, which was a 1925 Buick. [laughter] Well, I finished the four years and got an associate's degree in chemical engineering, and then continued on. … Let's see, I should have brought my notes.

KM: The notes are here, Dad. That's what we filled out. So, I guess Shaun and Lisa would like to know how you and your neighborhood were affected by the Depression. [Was] there a shortage of jobs?

CM: Well, actually, having my dad as the boss of the family, we were very fortunate because a police sergeant's salary, although it sounds like peanuts now, in retrospect, he put all the kids through high school. It cost, you know, money to have them there. We were actually lucky, and then, in the meantime, in 1910, he bought a bungalow in Leonardo, which is in Middletown Township on the Sandy Hook Bay, and I grew up being at the beach all summer, as long as the weather was clear. In fact, I would be building rafts and things like that at the beach, as well as going swimming. A lot of the time I was there, the sun was, you know, real hot and everything,

so, I would get a real big sunburn and, when I went home, my mother would douse me in vinegar, [laughter] which was the standard cure for it. I wound up with over a hundred moles on my back, which I had removed a few years ago, by cryosurgery, using liquid nitrogen. You just squirt it [liquid nitrogen] on and, in a week or so, it [the moles] just comes off. … Fortunately, they could have all turned into cancers and I lucked out on that.

SI: That is very fortunate.

CM: Yes. …

SI: Did your family have to cut back on things, though, like food?

CM: Not to my knowledge, no. As I said, my dad had a rather small salary, but, in retrospect, he was rich, putting us all through school and having a bungalow at the Shore and a car and all that sort of stuff, during the Depression. Yes, I was really fortunate, as was he. He wound up retiring as a sergeant. He had to retire at sixty-five. Well, he got a pension, something like two thousand dollars a year, and that two thousand dollars did wonders, in retrospect. [laughter] So, as far as my education is concerned, … all my college education was at night. After I got my associate's degree, … what did I do?

KM: Did you [continue] going to NCE for a little bit, then the war started?

CM: Let's see, I got out in; oh, boy.

LC: Well, we went through this when we were filling out the pre-interview questionnaire.

CM: Yes, that ought to be there.

SI: We can add that later.

KM: Yes. So, you were drafted in [September 1942].

CM: Well, if you want my service record …

SI: I was curious; when you worked at the pigmentation lab at DuPont …

CM: Pigment, yes.

SI: Could you describe for us some of your typical duties, what you did in an average day?

CM: Well, when I started there, coming from the pharmacy, I was a laboratory assistant, not having any significant education to go higher. So, I worked in the laboratory, which was right up my alley because of my chemistry set. [laughter] … Well, I learned all about pigments from the bottom up and, eventually, I became an expert on, "What is a pigment?" You know, I learned that all pigments, or most of them, are small crystals, in the order of a micron or so in size. … If it's much larger than that, it's not as effective as a pigment. It could be smaller. In fact, that

would be desirable, because one thing about the size of the pigment crystal is, when you mix it with, like, a printing ink, for example, which was one way of testing it; you would grind it up in a vehicle, like varnish, and it would become a printing ink. To find out whether it's applicable as a pigment, you would dilute it with zinc oxide, which is a white pigment, to make it tint, and the smaller the crystal, the stronger the tint would be. So, ideally, the pigment's so-called mass tone would be, well, in the case of my pigment, red, and, when you put [it with] zinc oxide or any other white, like $TiO_2$ [titanium dioxide, a fine white powder used for tinting] is the common tinting white, it would measure the strength of the pigment. Now, if you had larger crystals than, say, the smaller ones, the ones with the larger crystals would be weaker in tinting strength, whereas the smaller ones would be stronger, which is desirable. … Well, getting back to my pigment, actually, there was a demand, back in 1950s, which is when I was there, for red pigments that didn't fade out or change color and whatever else the current red pigments did. There would be a really big demand for it, and it so happened that we were lucky, in part, because … well, better get back to the compound. There were two of us looking for new red pigments. The other fellow was an organic chemist, a PhD, and he … was really lucky that he found, in the current literature of organic chemistry, a red compound. When he went through the procedure, as written, he came up with a red powder. … When he [developed] the so-called mass tone, which is the full red, that looked good, in fact, very good, and, after it was evaluated for tinting strength, by adding a white to the red, it was weak. So, I had taken that pigment that he made, which was red, red powder, in crystals, and I evaluated it by adding white to it and found that the crystals were too large. When I reduced them to the right size, by grinding them in, like, a ball mill, that [process] cut down the size of the crystal, which made it stronger in tinting strength. Then, the particle size was very small, whereas what my friend made was maybe two or three microns in length and was weak because of the size. So, I ground it up in the ball mill and made it so [that] it was strong enough as a pigment – and that was what the new red pigment needed. So, I took my friend's large crystals and made them smaller and checked the tinting strength and it was within pigment range. … So, actually, I made a pigment out of a real large crystal, by grinding it down. So, I became a co-inventor of so-called quinacridone red pigment [US Patent #2,844,581].

KM: And you got a patent for it, too.

CM: Yes, a combined patent, Manger-Struve [after co-inventor William S. Struve]. So, I should have shown you. I've got it framed.

SI: That was in the 1950s.

CM: 1958 was the patent date, and I'm first on the list, Manger and Struve. So, he was lucky and so was I, but I had a little more intelligence than luck. [laughter] …

KM: Ah, Papa …

CM: Well, no, I knew what to do with it. …

SI: Going back to when you first were with DuPont, in the 1930s …

CM: Wait a minute, '30s …

KM: You graduated from St. Benedict's in 1931.

CM: Yes, '31 was when I graduated.

KM: And you were at the drugstore for awhile. So, this was in the '30s and '40s.

SI: Did that job involve testing the pigments a lot?

CM: Yes, other than, you know, cleaning up the lab and whatever, I did test pigments, and what my friend made was one that I tested. … Oh, I was also in charge of an electron microscope, which happened to be the best one in the world. It was a Japanese [machine].

KM: Electron microscope, right.

CM: Electron microscope, yes, that resolved the particles smaller than a micron. So, I used that to its full extent.

SI: That was, again, in the 1950s, or was it in the 1930s?

CM: No, that was in the '40s.

KM: 1951, you went up to Cornell to [learn more about the electron microscope]?

CM: Oh, yes. Oh, in the meantime, I had gotten my associate's degree. So, that gave me a little more "umph," as far as my education is concerned. …

SI: In the 1930s, were you aware of what was going on overseas in Europe, with Mussolini and Hitler's rise to power?

CM: Only what's in the paper. I think we had a radio then, no televisions.

SI: You were not concerned about the potential for a war in the 1930s.

CM: Well, it touched me, because … I had been getting deferred. I was drafted and I was deferred right after I was drafted. You know, I was drafted without, you know, being in the service. … One thing about getting old is that I don't have a memory anymore. [laughter]

SI: You are doing well.

CM: So, where do we go?

KM: Well, either in '42 or '43, when you were age twenty-nine, you went into the Army. You enlisted, Fort Dix.

CM: Well, before that, I was an air raid warden, which is pertinent, and I walked up and down my territory and didn't see any suspicious-looking people. [laughter] So, it was all right.

SI: Was it your block or your entire neighborhood?

CM: It was a neighborhood, yes. …

SI: Do you remember where you were when Pearl Harbor was attacked?

CM: Well, that was after I graduated from Benedict's. Well, you went along with the tide.

SI: Do you remember how you heard about it? Was it on the radio?

CM: Probably radio, more than anything, newspaper. What else?

SI: How did you react to the news that the United States was in a war?

CM: Well, since I was draft-able, see, I also had my associate's degree in chemistry, which gave me some priority. So, in fact, I was deferred for a year or so. I was drafted in – what's the year?

SI: 1942 or 1943. [Editor's Note: Mr. Manger was inducted on September 16, 1942, Newark Armory, Fort Dix, New Jersey, 1229th Replacement Center, as per his Army service diary.]

CM: Yes.

KM: When you were twenty-nine, you went to Fort Dix, right? You joined the Army when you were twenty-nine.

CM: Yes. That was after I was drafted.

SI: You could see big changes on the home front even before you went into the service.

CM: Oh, yes. The people were aware that, you know, we're sending young fellows overseas and stuff like that.

SI: Also, they had these blackouts and the air raid drills.

CM: Yes. I was involved in that, to a certain extent.

SI: Why did you get involved in that?

CM: Because I was deferred, deferred from being drafted, for at least the first year. …

SI: You just wanted to do something for the war effort.

CM: Well, … I fell into that. I mean, I don't know whether I had too much choice or not. …

LC: You were quite older than most men that were drafted.

CM: Yes, yes.

LC: Were you put into any particular leadership roles?

CM: Because of that, after being drafted? No; actually, well, after being drafted, I had to go to Fort Dix, for, what do they call it?

SI: Induction?

CM: Yes; well, before …

KM: Boot camp?

CM: Yes, in effect, boot camp.

SI: Okay.

CM: And, after I finished that, at Fort Dix, they weren't sure where to put me, because I was so unusual, you know, with the partial degree and stuff like that. So, where do I go from here?

SI: Was the boot camp for a long time or just a few weeks?

CM: Two months.

SI: Two months.

CM: Yes. Oh, when I finished that, they gave me a T-5 rank, which is the equivalent of a corporal, and everybody else was a private. [Editor's Note: In 1942, "T" ranks, technician classes, were added to the rank insignia. Each technician was addressed as the equivalent rank in his pay class: T-5 as corporal, T-4 as sergeant, etc.] So, they did recognize me, or at least my education, but I had the T-5 for a couple of years, and then, I eventually got a T-4, which is, they called it, … the buck sergeant.

KM: So, these three stripes [pointing to CM's uniform, which he brought with him]?

CM: Yes, three stripes is a technician, third grade, which is the equivalent of a buck sergeant, but without the "T," and [pointing] these bars are years of service and I'm not sure about the emblem. …

SI: Is that an overseas stripe?

CM: It could be, yes. Yes, you want to talk about my experience onboard?

SI: How did you wind up on the troopships?

CM: I was taken out of boot camp, with my T-5, and my experience to that point … before I was drafted, implied laboratory work, and one of the main laboratory jobs in the Army is in the Army medics as a lab technician, … like, being in charge of a laboratory that takes blood work and things like that. So, that is what they targeted me for doing, when I had more experience. So, I was assigned to [be] lab technician in the Medical Department of the Army, and that's where I wound up at the end. So, well, the main thing is that I was ten years older than all the young kids. That was part of my history. Well, I was selected for a platoon of the Army medics, which had a medical doctor as the commanding officer, and he became a captain, and the second-in-charge was a dentist, who was … a lieutenant because of his education. I became the lab technician, which is, you know, above the [less]-educated enlisted men. So, then, we had a pharmacist who was also an enlisted man, but he was one level above me. He was the platoon leader, you know, of the enlisted men and I was next in line. So, well, I kept the T-5 through, I guess, a couple of years, and we had our platoon of twenty men and the officers. [We] would be stationed in an Army hospital in the United States, and then, when the need for bringing wounded back from; well, at that time, it was Africa, in the desert. … We had been selected to go to Casablanca because there's an Army hospital there, that we stayed there for awhile, and we had gone over on a troopship, which brought the troops over to the other side. So, we're at the Army hospital in Casablanca for, well, we stayed about three weeks or so, until they had enough wounded to be shipped back to the US. So, after that length of time, we got on the troopship, who also brought wounded back that were mobile, but we had the ones who were bedridden and whatever. So, we took care of them onboard ship until we landed over on this side. So, then, we would stay at an Army hospital here until the next trip was initiated. So, I spent an awful lot of time on the Atlantic Ocean and I just recently added up all the time I was actually on the ocean, per se, added up to just about a year, 365 days onboard ship on the ocean. One thing that we had heard about, but not too specifically, was that underneath the Atlantic Ocean's surface was loaded with U-boats. [laughter] … They had been sinking U-boats along the coast here, you know, for a couple of years, and one thing about U-boats [is] that they can only go a certain speed under water and a lot of the newer and better ships that were being used for troops, like the [RMS] *Queen Mary*, [RMS] *Queen Elizabeth*, they were faster than the U-boats. … We'd have to go over from the US to [the European Theater]. The first couple of trips, we went to Casablanca and we were on, more or less, luxury liners, just for the ride, going over to Casablanca. So, as far as the U-boats are concerned, the fast boats could go faster than the U-boats, but they would zigzag, so [that] the U-boats couldn't line them up and sink them, which they did in a lot of cases. So, I don't know, I was just lucky. …

SI: Did you work directly with patients or were you just analyzing samples?

CM: No, no. I was part of the group. Whatever the group had to do, I was doing it, too. Yes, we had twenty enlisted men, including … let's see, the pharmacist was an enlisted man. He was the highest ranked enlisted man, and then, there was a surgical technician who was underneath him, also an enlisted man, and then, the lab technician was after him.

SI: What would you do in a typical day in the lab?

CM: The only thing I really did was going over with new troops who went overseas to, you know, relieve the ones that are coming home. Where was I? …

KM: Is this the appendix story?

CM: Oh, yes, that was one thing I wanted [to mention]. Yes, one of the trips going over, with new troops, was [when] one of them came down with what seemed to be appendicitis. So, fortunately, I had taken that in a refresher course that I had attended before I was relieved of going to school here. … I learned how to do a test for appendicitis, which meant taking some blood and analyzing [it] in the microscope, or whatever. So, I determined that it was appendicitis. So, we were on the way over to England, where it was the port where the ship would go, and, well, when we reached the dock, the medics came on and took him to wherever. …

KM: But, the doctor or the dentist did the surgery, right, onboard ship?

CM: Yes, yes. Our physician, who was the commanding officer of our platoon, actually did the appendectomy, but he was some other kind of physician, that didn't sound at all like a surgeon. [laughter] So, well, he managed his way through the operation. To get at the appendix, you have to pull out the intestines. … He opened a slit near the appendix and started pulling out the …

SI: Intestines?

CM: Yes, he was pulling out the intestines, "Whoops, wrong way." [laughter] He stuffed it all back, and then, went the other way and, "Sure, hey, there it was." So, he pulled it out and he cut off … where the appendicitis was. … He sewed him up and, the day after, we landed in England and they came aboard and brought him ashore, to a hospital. We never did find out whether he survived or not. [laughter]

KM: So, you did the blood test for the appendicitis. Did you do other …

CM: Yes, I did the blood test and it was definitely appendicitis.

KM: So, did you do other kinds of lab work, either with patients or other passengers?

CM: Very, very little.

KM: So, you were basically helping the wounded when you brought them [onboard].

CM: Yes, yes. Then, we had made, I don't know, a lot of trips with my position that way and, eventually, our platoon was disbanded and I was assigned to a so-called Victory ship, which is one of the cargo ships that was developed during the war, that and the Liberty ship was the smaller one. So, I was on the [SS] *India Victory* for at least a year after I left the platoon and my job there was still a lab technician, but I was the only medic onboard, I mean, other than what may be going over. So, I took care of the so-called lab, just in case. … I had very little activity in that role, but I was with the *India Victory* for quite a few crossings. See, with that ship, that

was toward the end of the war, at least in Europe, and, actually, I was on that on the Atlantic Ocean, again, on top of the U-boats, and then, where were we?

KM: So, you did thirty-eight trips, back and forth, all together, thirty-eight crossings.

CM: Yes, thirty-eight crossings.

KM: Of the Atlantic Ocean, during and after the war time. … When we were filling out this pre-interview form, Dad, you mentioned that on one trip … from France to New York, everybody else was seasick [other than] you and the Skipper.

CM: Oh, yes, yes. It was after the war. …

KM: And there's a hurricane.

CM: We hit a hurricane just off the Jersey Shore and it was a real hurricane, … we're about a day offshore, and our cargo on that trip was, primarily, US soldiers who had been on the frontlines during the heat of battle, and the only people who weren't seasick were the Skipper and me. … We were on the bridge and, in fact, one time, we went over about forty-five degrees and weren't sure we were going to come back. [laughter] See, when you have a ship and you hit real large waves, maybe forty, fifty feet high, if you get caught in the trough, like this way, you can go in like this. So, we were caught, at least partially, in the trough and that is when we really felt the storm. The guys who came from the frontlines, in the thick of battle, they were going home, because the war was over, at least in Europe. More than one of them said, "I would rather be back on the frontlines than have your job." [laughter] So, that really did me wonders.

KM: Put things in perspective, yes.

SI: How often would you run into storms like that?

CM: That was the only hurricane we had, out of thirty-eight crossings. … I was brought up on the seashore, [laughter] so, somehow or other, I developed my sea legs, and then, eventually, I had a twenty-foot boat, too.

SI: Can you give us some idea of the work you did with the wounded GIs? What would you do for them?

CM: Well, those that had wounds with dressings, we would change the dressings, occasionally. Usually, there were other medics that came back with them, but I guess the more serious wounded came back by plane, although that was during the war.

SI: Were a lot of the men coming back affected with combat fatigue, more mental problems?

CM: I'm sure there were, but we didn't have much contact with them, at least I didn't. See, I was no longer a lab technician, per se, when I was on the Victory ship.

SI: What about earlier, during your earlier crossings?

CM: Well, when I was still a member of the platoon, I was still a lab technician, but I would, you know, help the other guys. We stayed in Army hospitals on both sides, you know, in-between trips. One time, I was on the *Queen Elizabeth* and, in fact, I was on that three or four trips, and I was on the *Queen Mary* four or five trips, and, one trip, I came back on the *Queen Elizabeth,* crossed the pier and got on the *Queen Mary*.

KM: To go back the other way.

CM: … I crossed the pier and came off one and got on the other one, went back.

KM: So, no shore leave, huh?

CM: No shore leave. [laughter]

SI: Would you get a chance to go and see some of the places where you made port?

CM: Usually, it would stay there for as much as a week or so and we would have as much as a … week's pass. So, like, on the last trip I made, before that, I had enough so-called points to be discharged, but, then, a hospital ship was in New York and they sort of shanghaied me on to a hospital ship. So, I had to go over to France again. One good thing about it, we were in a French port and I got a week-long pass to go to Paris, where I never was before, so, I made good use of that. What else?

KM: Tell them your Arabian horse story.

CM: Oh, yes, the first trip we made, as a platoon, to Casablanca, which is on the ocean, west of the …

SI: Gibraltar.

KM: Strait of Gibraltar.

CM: Yes, Strait of Gibraltar, yes; we never did get in the Mediterranean, but some of us had ridden horses before. So, we got a group together and rode down the beach a way and the horses were sort of dead. So, we had the horses for an hour. So, we stopped at an appropriate spot and decided … we'd better go back before the hour's up. So, we turned around, "Zoom." [laughter] We got back in about five minutes.

KM: That's his Arabian steed.

CM: So, that's the fastest I ever rode on a horse. Fortunately, I didn't fall off, and one of the other guys did. That was something.

SI: Was there a lot of military protocol followed in your platoon, or was it more loose?

CM: It was loose. Yes, you know, like, we didn't do much marching at all, which we could have, but, onboard ship, it was pretty informal.

SI: Was there a real split between the officers, the doctor and the dentist, and the enlisted men or were you all treated equally?

CM: Oh, they were (chummy?).

SI: Did they have more privileges?

CM: Well, where it was possible, they would. …

LC: What were the conditions on the ship like? How do you remember the food and the sleeping quarters?

CM: Oh, it was marginal. Sleeping quarters, usually, was a pipe going out three feet, and then, seven or eight feet the other way, and then, back in again, with a piece of canvas on it. That was our bed, and they were usually three high or maybe four high. So, it depends on how good the other fellows were as sailors, I mean, [if] they could, you know, ride out a storm or whatever. We didn't have any other hurricanes, or even a real bad storm, because they would avoid the storms, if they knew about them. You know, they had pretty good radar detection. So, well, the best thing I liked about the whole job was that, whenever we would come in port on this side, we would get a pass to go home, and not many people had a pass every two or three months, you know, for a week or two. So, I was very thankful for that. Then, on the other side, we could get passes to go, like, in Casablanca and to the beach and things like that. There were some limitations, of course, but we'd never get it if we didn't go overseas. So, I liked that a lot.

LC: While you were away, did you maintain any contact with your family and friends?

CM: Well, there was always mail, but, a lot of times, I would beat the mail home. So, yes, … I did write some letters and Christmas cards and stuff like that. … I had a racket as far as that's concerned, but you can't forget the U-boats. We were always under pressure of U-boats.

SI: Did the ship always come back to New York?

CM: No. We had ports in Massachusetts and South Carolina, North Carolina, even Virginia. See, I made thirty-eight crossings, so, there were nineteen on this side, nineteen on the other side. On the other side, the first two, we went to Casablanca, which has a port there, and most of the rest were in England or Scotland, as were the *Queens*, the *Queen Mary* and *Queen Elizabeth*. … Later on, when it was safer, at Southern England, there were ports there, and then, Liverpool was an important port. So, well, whenever we went to a port like that, we would go to the nearest Army hospital and stay there, usually a week or two, and we may or may not work in the hospital. One time, they needed someone to take charge of the motor pool and I got that job, [laughter] driving a truck around. So, they made use of us as they needed.

SI: Were you delivering supplies?

CM: Once in awhile, we'd deliver something, but they made use of us.

SI: Did you feel like you always had the right amount of supplies to do your job? Were there any shortages?

CM: I don't think so, because I didn't do my job as lab technician much at all. In fact, the most I had was when they trained me, before I got into the platoon. I went to a college out in Indianapolis, where I took college courses in hematology and urology and all the other "ologies," as far as being able to do the analysis. So, I was there at least two full months and they made a technician out of me. …

[TAPE PAUSED]

SI: We had been talking about your training in Indiana.

CM: Oh, yes. That was college-level analysis and whatever, presumably, that I would find useful in my job as a medical technician. There was a college course in hematology, that's blood work, and three or four other "ologies," which were sort of foreign to me, but I learned a lot about it. So, then, what else?

SI: Did you find that your previous work at DuPont helped you a lot in this job, or not really?

CM: Well, I worked in the laboratory, … but I didn't do much laboratory work … in service.

SI: Was it difficult to maintain the conditions you needed, being on the ships?

CM: See, the only time I had a lab available was on the hospital ships, or ship, and I didn't have any jobs. So, it was one of those things. See, I could have been out in December, because I had enough points, you know, from my service, but, then, being on the hospital ship, it was April before I got out, … but at least I saw Paris. [laughter]

SI: Do you remember hearing the news of the war's end, particularly in Europe?

CM: Oh, yes. We were pretty well brought up-to-date.

SI: How did you and others react to that?

CM: "Thank God!" I don't know; there were feelings, I guess. …

[TAPE PAUSED]

CM: … Where were we?

SI: We were talking about the end of the war, towards the end. You mentioned you had to go on this extra trip. Had there been any close calls on any of the crossings? You mentioned that the U-boats were there.

CM: … Well, when we went alone, like on the *Queens* [*Queen Mary* and *Queen Elizabeth*] and the better excursion boats, you know, that were available, they could go by themselves. We would get a slower ship [sometimes], but, then, we would go in convoy, with Navy destroyers protecting us from the submarines. So, in other words, they couldn't go fast enough to outrun the submarines by themselves, so, the Navy took over, and the only incident on that was, we would hear the destroyers dropping depth charges, but we never heard whether they got any U-boats or not. [laughter] So, it was one of those things. But they were there, no question about it.

SI: What about air attacks? Was there any danger of that or did that ever happen?

CM: We had no contact with the air.

SI: When you would get close to Europe?

KM: Or when you were in England, in between trips?

CM: Oh, when I was on leave in England, I was on pass in London a few times and we heard bombs coming down in London and, well, we were just lucky that we weren't in the place where the bombs were. So, that was the closest I actually got to the war.

SI: What did you think of some of these different areas that you got to visit, like England? What did you think of England?

CM: Well, it's still there. [laughter] They were bombed a lot and, when I was in London, I did hear bombs, you know, coming down, but I wasn't where they were, so, I lucked out.

SI: Did you get to know any English civilians?

CM: Fortuitously, our first trip to England was in what they called Cirencester, which is sort of in the middle of England, both ways, and we were there a week or so, in a hospital, and we got passes to do whatever we wanted to do. So, that was my first trip where I wound up in England, but, then, I think the next year, or a year-and-a-half or so, we went back to Cirencester and I couldn't find the gal I was sociable with, but, other than that, it was the same stuff.

KM: But, when you came back to the States and in-between trips, you saw Mommy once in awhile and she used to give you stockings.

CM: Every time, every time, sure.

KM: They weren't married until after the war, but my mother was a good friend of his and gave him stockings and stuff to bring over to the gals over in England.

CM: Well, my aunt worked in Kresge's Department Store in Newark and I had visited her quite frequently on the seventh floor. … One time, she was trying to fix me up with a date and she called [Mary] … to come out of the office to meet her, which I did. … Well, I wound up marrying her and we were married sixty years. When she became ninety, … she passed away.

KM: … She was being a good pal and she gave him gifts to give to [his] girlfriends over there.

CM: Oh, yes, yes. [laughter] I told her that one of the things that was biggest with … the fellows meeting girls was nylons, … which just came out. … As far as [anything] scenic or scenery, I saw more water than anything. [laughter]

SI: Did you ever have a problem with seasickness or just being on a boat for too long?

CM: Not me, no. Somehow or other, I didn't get seasick.

KM: How long did it take for a crossing, with good weather?

CM: Well, with the *Queens*, it was about four to five days, because they could go fast, whereas the longest one would be a convoy; that took about three or four weeks.

KM: That's when you were in a slower-moving ship and other ones were around you, to protect you, in case of attack.

CM: Yes, Navy destroyers, yes.

LC: Did you feel more comfortable on the quicker ships with no escorts or the slower ships with escorts; in which did you feel more protected from U-boats?

CM: Well, we knew that the fast ships were avoiding the U-boats and, well, we just didn't think about it. It wasn't our time. In fact, we never did hear about [anything]; see, I was with the 533rd Medical Hospital Ship Platoon and I knew another lab technician who was in the 532nd Medical Hospital Ship Platoon. … I had heard [that] they went someplace else than we did. In fact, they were in a convoy and I never saw him … again. So, as far as keeping track of your friends, … there wasn't much there. … That was it.

SI: How did the men in the platoon get along?

CM: All right. Yes, … we played cards or stuff like that in our spare time, and we didn't play with the officers. [laughter]

SI: Did you have a lot of free time or did they keep you pretty busy with the wounded and the lab work?

CM: We had enough. Yes, the main thing was getting passes. See, we had to get a pass to leave where we were, and it depends on how long they think we're going to be there at the hospital, like, overseas. They would give us a one-day pass or as much as a week pass, which is what I

had for Paris, which was the only week pass I ever had. [laughter] The only time I went to Paris, it was really something.

SI: Earlier, you talked about the appendix operation.

CM: Yes, yes.

SI: Were you told about that later or did you actually observe it?

CM: We never heard anything after.

SI: No, I meant, did you actually observe the operation?

KM: How did you help with the operation? Did you just watch or did you assist them?

CM: Oh, well, we had a surgical technician who did most of the help and I did the analysis of the fellow's blood and determined that it was an appendicitis situation.

KM: But, then, during the operation, what was your role?

CM: I didn't do anything.

SI: Were you in the room, watching?

CM: Pretty much, yes.

SI: How often would you be called in to work on an operation like that?

CM: Once.

SI: That was it.

CM: Yes.

SI: Nothing else in the hospitals.

CM: That was the only case we had.

SI: Never at any of the hospitals, overseas or here.

CM: No.

KM: Dad, … the wounded that you were transporting back to the States, did any of them ever die in the crossing?

CM: No, no.

KM: So, they were stabilized.

CM: Yes, such good care. [laughter]

SI: Did you get to talk to them?

CM: Once in awhile, yes.

LC: What was the morale of the troops like, especially the difference between the fresh men going over and the ones returning?

CM: Well, they didn't meet each other, actually. …

SI: What did you observe in talking to the guys who were going over into battle and those who had just come out of it?

CM: Well, the only thing that comes to mind is, the guys who were at the frontlines didn't want my job. [laughter]

KM: But, were the fresh troops going, that you were bringing over to fight, were they apprehensive of going [or] were they excited, "Yeah, rah," about going?

CM: Well, they weren't too excited about going into war, but they were trained. …

SI: The people coming home who were wounded, were they just happy to be coming home or were they despondent about what they had gone through?

CM: Well, they didn't want to go back. So, there's always the thought of seeing their folks and stuff like that.

SI: At the end of the war, was there any possibility that you would have to go to the Pacific?

CM: Oh, when I was assigned to the Victory ship, V-E Day came to pass. In other words, the war in Europe was over. So, the *India Victory* wasn't set up for Pacific Ocean duty. In other words, you needed a real big refrigerator and a lot of other things that had to do with longer trips. So, there was a shipyard around Perth Amboy, that they took the *India Victory* [to]. They were starting to convert it to a ship for Pacific duty. About a week after they went into that situation, V-E Day came and went, but maybe it was V-J Day, you know, when the war in Asia was finished. So, they stopped converting and made it, you know, [for] just the Atlantic duty. So, then, we didn't have to worry about [the] Pacific, a big refrigerator and all that stuff, but, we went back to Atlantic duty and I told you about that.

KM: So, if the war [with] Japan hadn't stopped, would you have been sent over there to help?

CM: Probably.

KM: Really?

CM: To the … Pacific Ocean, yes, sure, yes, because there were a lot of guys over there that had to come back. So, we would have stayed in the Pacific Ocean, between the islands near Japan and California, where I never was before.

SI: You mentioned that you were rare among GIs, in that you could go home every so often.

CM: Oh, yes, sure.

SI: When you were in the States.

CM: Well, others in my group [also].

SI: Yes, but, relatively, that was rare, to be able to visit home.

CM: Yes, yes.

SI: Was it difficult to have to keep leaving and going back on the ships?

CM: Well, I was used to it and I appreciated having time off, and so did my family.

SI: Could you see changes on the home front each time? Was there more rationing going into effect?

CM: Well, whatever happened, I was aware of.

SI: Nothing stands out in your memory, though?

CM: No.

SI: What did your family do during the war?

CM: Well, my dad was cop, so, he was still a cop. … He held a steady job and, fortunately, he was able to work in the police precinct that was only a couple of blocks away. In fact, during his term of office, he was a teacher of rookies – you know, break them in and all that sort of stuff, so, that was part of his job, too. But, what amazes me, in retrospect, is how rich he was, [laughter] with even his low salary of a sergeant. You know, when he bought the bungalow, in 1910, it was less than a thousand dollars, but he bought it and we went there every year in the summertime. So, yes, we got a lot of use out of it, didn't we?

KM: Yes. I used to go there when I was a kid. It stayed in the family until he moved to Middletown, and then, you sold it.

SI: Did either of your siblings do anything during the war?

CM: No, not really.

KM: They were not in the service. You said Uncle Bill was not. … Uncle Bill was older than my dad.

CM: Yes, he was about seven years older than I am, or was, so, he would have been beyond drafting, and my sister, she was almost ten years older, but she worked as a secretary.

SI: After you returned from France on your last crossing, how quickly were you discharged?

CM: Within a couple of weeks or so. [Editor's Note: According to Mr. Manger's Army service diary, he arrived in New York on February 22, 1946, was transferred to Fort Hamilton on March 1st, arrived in Fort Dix on March 6th, and was discharged at 11:40 AM on March 9, 1946.] So, it didn't take [very] long.

SI: What were your plans for after the war?

CM: Continue college.

KM: And you continued your job, too.

CM: And continue my job. I'm glad I did everything I did.

KM: While I was out [of the room], did you talk about college after the war?

SI: No. You went back to the same position in the lab at DuPont.

CM: Yes.

SI: Did you stay at Newark College of Engineering or did you make the switch to Seton Hall?

CM: No. … Actually, I went there four years and got the associate's degree, and then, a year after that, I was drafted. So, then, I was out … in service about three-and-a-half years. So, then, when I went back, I had five years at night under my belt. So, when I went back to NCE, they wanted me to go two more years to get a bachelor's. So, that didn't appeal to me at all because I thought maybe I could do it in one more year. So, Seton Hall University had classes in Newark at that time, at night, and I went there and asked them about getting a bachelor's degree and they said that I could make it in a year plus. … Oh, Seton Hall had summer classes, too. So, I decided to go to Seton Hall in the summertime when I was working in DuPont, and I was able to get enough credits to give me a bachelor's degree, … a full year of Seton Hall classes, plus, the summer school and whatever odds and ends that I was doing. That way, I got a bachelor's from Seton Hall.

KM: In chemistry, right.

CM: In chemistry. …

KM: Not chemical engineering, but chemistry.

CM: So, then, one of the things I did … with Seton Hall was to teach the chemistry lab to the evening class people. I was married then, and with kids, and could use the money. [laughter] So, I kept that job for two years, you know, actually being a chemistry lab instructor. So, I got that much experience toward my degree. … You've got the dates about when I got my bachelor's from Seton Hall.

KM: Isn't that when Patty was born, around then? You were taking exams for graduating from Seton.

CM: So, I was going to Seton Hall at night and, in the year that I would get my degree, I had final exam week and guess who was born? [laughter] our first daughter. So, I had to, you know, go through that trial, as it were. So, well, I did all right. But, then, I liked the job teaching the lab at night, and they asked me if I could stay with them and I actually stayed two years, teaching at night. So, that helped to get me the bachelor's degree.

LC: Did you use the GI Bill when you returned?

CM: As much as I could. See, I went to school at night five years before I was drafted, and then, when I went back, I didn't go to classes at Seton Hall until the last year I was there, and I used the GI Bill for that. Well, that helped a lot, too.

KM: Then, you went for your master's, back at NCE, in chemical engineering.

CM: Yes. Well, I got my bachelor's at Seton Hall. And then …

KM: After you finished your bachelor's at Seton Hall, you went for your master's at NCE.

CM: Yes, yes.

KM: And he was going to go for his PhD, but the only place that offered a PhD in chemistry or chemical engineering wasn't in Newark.

CM: Brooklyn Poly [Brooklyn Polytechnic Institute of New York], and I went over there once. It took me about ten hours to go over there, have a class and come back, ten hours, at night. [laughter] So, I'd get home after midnight. …

KM: And, at that point, his second one was probably born. So, it was nice; he stayed home with the kids.

CM: Yes. So, I gave up on that.

SI: Did you want to start a family right away after you got out of service?

CM: We did. Didn't I tell you that?

KM: [CM's first child was born in 1948.]

SI: Yes, you mentioned that.

CM: Patty, yes.

SI: Yes, but did you feel like you wanted to make up for all the time you had lost in the service or did it just happen that way?

CM: … That was fortuitous.

KM: He and my mother had known each other for seven years, before and during and after the war.

CM: Yes. We were old buddies.

KM: And she can dance the best, or maybe that was Mommy's excuse to marry you, right? You could dance the best.

CM: Yes, it was. She liked the way I danced. [laughter] Now, I can't; I can't stand up.

KM: Oh, sure you could, with the walker.

CM: I have zero balance.

SI: During that period, what happened with your job at DuPont? You came back, you went into this position, and then, eventually, you became a research chemist and started working on the red dye.

CM: Well, I was a lab technician when I went back to work after the Army. It was really a lab technician job. In other words, I did what I was told to do. In fact, I was in charge of the electron microscope I mentioned, and we had a spectrophotometer and infrared and anything else you would find in a lab. Well, I did that and, while I was doing that, I was handling the pigment crystals, and I was curious about them and I learned a lot that nobody else knew. So, my friend, the organic chemist, was lucky and, boy, that's really something. That compound that he discovered in the literature had so many offshoots. … It was what they call a quinacridone, which means there are five benzene rings, and the second and fourth had a C double bond O on the top, on the first one, and on the bottom, on the other one. … Then, in the mean group, NH would be opposite the CO, and then, there'd be an NH here and an NH here. So, the five benzene rings is a "quin," an "acridone" is the CO groups, so, actually, that's the name of the compound. So, later, other organic chemists started working on the molecule and they could change the end to a different group there, and then, on the other end, and it'd be a purple,

[laughter] and then, they would change something else and it'd be a really deep red. So, each of those wound up as a product.

KM: So, when you see red cars driving around, being driven, that's his pigment.

CM: Yes, red is one of the most popular cars [i.e., car colors], especially for new ones.

KM: That's his color; that's his pigment. So, it's used in paint and plastics and lots of other [items].

CM: Oh, yes, it's used in wherever you see red. … In the house, it would be [on] painted walls and stuff like that, or, in plastics, you can make a cup that's red, which I have one at home. [laughter] Well, that's really something.

SI: Did you know from the beginning that it would not fade or was that something that they found out through use?

CM: Well, the first test we had was with the one that the organic chemist made. That was tested in printing ink, showing that it was weak, because the crystals were too large. So, when I took that powder and put it in a mill, like a ball mill, and broke the crystals down to a much smaller size, and then, I had to treat them again, so [that] they wouldn't be broken-up crystals, that … each crystal was a particle in itself. When that was tested, that was still a good red and that <u>was</u> stronger when you put white in it. So, well, that is what made it a new pigment, the fact that it was stronger, and that's because I made it stronger.

KM: So, the fading, [do] you have to wait, with time, to see if it fades or is there a correlation between how it works?

CM: Well, they have fadometers, which is a high-intensity light source, and then, you put them in for a day; it might be equivalent to a month or so. So, you can tell whether it's any good or not by just a few days in the fadometer.

SI: How did he present this problem to you? Were you just talking about it one day or did he come over to you at your lab and say, "I cannot make this work. Can you help me?" How did that happen?

CM: … Well, see, he was, more or less, in the same capacity as I was, looking for new pigments, and … he studied the organic literature and saw a write-up on a new compound that was colored. So, when he synthesized the new compound and came out with a red powder, that was really exciting, and especially by me, [laughter] because I had looked at the crystals in the electron microscope, and even an optical microscope, and saw that the crystals were very large. I knew how to make smaller crystals out of the large crystals, which was just milling in a ball mill with a solvent, and, when I finished it off, they weren't just beat-up crystals. They grew, because of the solvent, into a perfect crystal. … And when I evaluated that, you know, putting it into a varnish to make an ink out of it, it was still a bright color and everything else. It was much stronger, which put it in the pigment category, and we really made out.

KM: So, after you got your bachelor's is when you got the promotion at DuPont to chemist? Before, you were the chem lab technician, and then, with the bachelor's, you were able to get the chemist position, and then, you became research chemist, and then senior research chemist.

CM: It was after I got the bachelor's that I was promoted to chemist, actually, research chemist, and it was about a year later that I made senior research chemist, which was after the work I did with the red. … Then, I was getting bonuses and time off and, you know, a few other benefits.

KM: DuPont was happy.

SI: What was it like to work for DuPont? What kind of company was it? Were they encouraging of your work?

CM: Well, we were, more or less, on our own, because the supervisors didn't know as much as we did. When we came up, or when I came up, with making the red compound better, I was actually enveloped in the development of the new pigment, which was in demand more than any other research project in the world.

KM: And you had worked your way up through the ranks as a chem lab technician, so you knew all the processes involved.

CM: Yes, yes. I had done so much work with the crystals that I knew what I was doing, pretty much. It was because of that knowledge that I made a pigment out of a red large crystal.

SI: Did many of your colleagues come through the same route, kind of working their way up through the company and through school?

CM: I don't know. There were some that went to school at night and got degrees, but not very many, like, a few. …

SI: Were you rare, to have a college education, in that lab?

CM: There were a few people going to college, but I don't remember any who, you know, went from a lab assistant through lab technician to a research chemist. I don't know of any.

SI: Are there any other projects that you worked on at DuPont that you would like to talk about?

CM: Well, the electron microscope was my real research tool, and the fact that we had one of the biggest ones in the world was enlightening.

KM: And I remember you said you were involved in the Electron Microscopy Society. …

CM: Yes, I was a member of the Electron Microscopy Society.

KM: And, when my mother was pregnant with me, so, like, Summer of '51, you were up in Cornell, learning about it.

CM: Yes, I went to courses that they had in colleges about electron microscopy, because that was a growing …

KM: Cutting-edge.

CM: Cutting-edge, yes. Yes, so, I met some nice people. Cornell had summer courses in, you know, electron microscopy, so, I went there for a couple of weeks.

KM: Did DuPont send you up there?

CM: Yes, sure. They paid all my expenses. … Yes, DuPont took good care of me, pretty much.

KM: And you moved to Parlin?

CM: Yes, the Newark lab, where I was, was a pigments research lab. There may have been maybe twenty scientists, at most, and that's where I got my original job with DuPont, as the lab assistant. … We also had a division in Parlin, in Sayreville.

KM: Was that more production or still research?

CM: No, they were in … powdered colors, or colored powders, and, well, I wound up doing research, combining my expertise with theirs, because they were involved in making a line of toners, you know, all different colors of the spectrum. So, I was really into that sort of thing. So, I wound up getting a patent [Patent Number 4215193, Manger; Fickes; Long] on a line of toners that can be used with what they're doing with it in Parlin. So, I got my name on that patent, too, with one other guy who did some of the early work. So, yes, I was there for six months or so. So, it wasn't too long after that I retired. … So, that's two of my big patents, worldwide.

SI: That is very impressive.

SI: … Did you work anywhere else after you retired from DuPont?

CM: 56 Fifth Street. [laughter]

KM: After they retired; no, Leonardo. [After my father retired, he and my mother fixed up the Leonardo bungalow before selling it.]

CM: Where did I work?

KM: … You and Mommy moved to Middletown. We moved to Middletown when you got the job in Parlin.

CM: Yes, that's why we went to Middletown.

KM: … That was '74 and you retired from DuPont … [in] December '78. So, you were there [working at Parlin] for, like, four years or so, not just a few months.

CM: … Yes, so, I went until I was sixty-five and I had to retire, although it was that period of time when sixty-five wasn't a demanding age. I didn't have to retire, but I was sixty-five in December of ['78], so I didn't want to work anymore. I had, what? forty-three years with DuPont, so I had a nice pension and a family and stuff like that. So, well, that was DuPont, but I'm still getting a fairly decent pension, in addition to what I would have gotten if I didn't invent anything.

SI: Is there anything else you would like to say about your career or your time in retirement?

CM: I don't know; met a lot of nice people. Oh, Parlin had a 100th anniversary of the plant's founding, and they asked me if I would come because I was one of the few people who were there. So, what'd I do? I went there and I showed my face, and it was the oldest plant in the country, a hundred years, and it has since closed.

KM: So, Dad, this, is this from the medical hospital ship platoon?

SI: We are looking at your uniform.

CM: That's a medical medallion. …

KM: So, on the collar, there's "US" on one side, on the right lapel.

CM: US Medical Department.

KM: And then, the medical hospital ship platoon.

CM: … That's my Good Conduct Medal.

SI: That is the European-[African-Middle Eastern Theater Medal].

CM: That's the European, and these, I think, are Atlantic Ocean, Atlantic Theater.

SI: The blue one is the American Defense Medal and that one is the World War II Victory Medal. This one is the European-African-Middle Eastern Campaign Medal.

CM: … Yes, that was the Atlantic Ocean duty, yes.

SI: What is the patch on the shoulder?

KM: This one, like a ship's wheel? Was that medical?

CM: That has to do with the ocean. I don't remember.

KM: And then, the three stripes with the "T," third grade.

CM: "T" is technician and three stripes means third grade. These are years of service, and that might be overseas service.

KM: So, three years of service. … Is that an Army sign or something?

SI: That is the "Ruptured Duck." I am not sure what the official term is, but that allowed you to wear a uniform even though you were not in the military, after you were discharged.

KM: So, this was put on after he was discharged?

SI: Yes. That way, you could wear your uniform, but you would not get into any trouble with military police for not being on duty.

KM: Still being in the military.

CM: Excused, yes.

SI: Because so many people did not even have clothes after the war, because they were not producing clothes.

KM: It's a nice, heavy jacket. …

[TAPE PAUSED]

CM: You want to talk about Seabrook?

SI: You have been here for awhile.

CM: Seven years, yes. Yes, it's about a total of ten years in existence. Yes, there are so-called two campuses. This is the main building of the first campus, and then, down there, where the Princeton Restaurant is, that's the second campus, and a third campus is still on paper, but they have it scheduled to go across the street, and there will be bridges and all sorts of things joining the two. Yes, we have our own bank here and things like that. … They'll even have a branch of the bank in the new one and things like that. … We have a pool. Did you see the pool?

SI: No.

CM: Well, I guess it's over that way. Yes, it's a fifty-foot, three-lap pool. We have a fitness center with all sorts of equipment, to exercise, and I go there Monday, Wednesday and Friday, for about a half-hour, forty minutes or so, and there's a series of different exercises that I have to do, and then, they write it down on a sheet of paper. When the paper's filled up, I turn it in for new paper, and then, if I do sixteen papers, that is a hundred hours. So, we have clubs for 100 [visits], … 200, 500, 750, 1000, and 1500 is the big one.

KM: So, what are you up to now?

CM: I just made 750.

SI: Wow.

KM: Isn't that amazing? Seven hundred-and-fifty times to the fitness center; does that count the swimming that you're doing on Tuesday and Thursday?

CM: No, no swimming, no.

KM: So, plus swimming. So, he's staying healthy.

CM: Yes, I go swimming on Tuesday and Thursday.

KM: And he gave up smoking cigarettes, which he was doing a lot during the Army.

CM: Oh, yes, that's something.

KM: He gave it up when my older sister was thirteen. DuPont had an employee awareness campaign of the dangers of cigarette smoking, what it does to your lungs. You saw pictures, right?

CM: Yes, yes.

KM: He transitioned from cigarette to cigar to pipe, but, then, he stopped, so [that] his daughters wouldn't follow in his smoking footsteps. So, I never smoked, because of that, and I don't think anybody else did, either.

SI: Did you smoke before you went into the service?

CM: Yes, yes.

KM: But, more so when you were there?

CM: Probably. Everybody smoked.

SI: Cigarettes were very plentiful.

KM: And people were not aware of the dangers.

CM: Yes, a nickel a pack. [laughter]

SI: Yes, fifty cents for a carton.

CM: Yes, yes.

KM: No, I remember going on the bike, during the summertime, to get you some cigarettes and it was like twenty-five or thirty cents at that point, before he gave up.

SI: In World War II, it was just a nickel a pack.

KM: So, in the '50s, it was twenty-five cents or so.

LC: It just skyrocketed from there.

CM: … Do you still smoke?

LC: I do not, no.

KM: But, something I do have to say, … as number two daughter of four daughters, is that he and my mother were both wonderfully supportive of his daughters going to college and beyond. So, like, without your support …

CM: Yes, yes. I put them through bachelor's, and then, they went on their own, getting their own jobs and …

KM: Teaching assistantships and stuff like that.

CM: Yes. So, Patty is an Ed.D., Kathy's a Ph.D., Martha has a master's in math, one in computer science.

KM: … Then, she went back to school for all the counseling degrees and certifications.

CM: Yes. Then, she got one to be a licensed counselor. Have you heard of 180 Turning Lives Around?

SI: No.

KM: It's the Women's Resource Center of Monmouth County.

CM: Well, it used to be Monmouth County Women's Center, where women would call the hotline … and complain about their husbands beating them up. …

KM: … They were taking a stand against abuse and [they] got out of the abusive situation. …

SI: It sounds like you were pretty pro-women's liberation.

CM: Yes.

KM: Pro-children. [laughter]

SI: Okay.

KM: Supporting your children. We just so happen to be all females.

CM: One year, all four of them were students at Rutgers.

KM: Yes, my father has a mug, … 1976. It was a good college basketball year, so, there was a special mug and I remember that year, I think it was, or '77, we were all [students at Rutgers].

SI: Yes, 1976, they were undefeated that year.

KM: Was it? Okay, because I was just finishing up my master's at Rutgers, over at Busch, and Patty was there, Martha was there, for graduate work, and Carol was going for animal science as an undergraduate. … Thank you both so much for coming. It's nice to have this on tape.

CM: Yes.

SI: Thank you very much. We appreciate your time and your service and sharing all your stories. That was very impressive about the patents. That was very interesting.

CM: Oh, yes; oh, that was exciting.

SI: Thank you very much, both of you.

LC: Thank you.

---------------------------------------------END OF INTERVIEW---------------------------------------

Reviewed by Matthew Doherty 10/16/08
Reviewed by Shaun Illingworth 2/1/09
Reviewed by Sandra Stewart Holyoak 2/6/09
Reviewed by Charles Manger & Kathy Manger 10/22/09