



Interview with Clyde MacKenzie

**Under the Auspices of the
Monmouth County Library Headquarters
125 Symmes Drive, Manalapan, N.J.
Flora T. Higgins, Project Coordinator**

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Name of Interviewer: Ellen Williams

Premises of Interview: Home of Clyde MacKenzie, Jr., Fair Haven, NJ

Birthdate of Subject: June 4, 1931

Ms. Williams: Tell me what you've discovered here in Monmouth County.

Mr. MacKenzie: Well, I'm interested in fishing histories, and I wrote a book published by Rutgers University Press, on the fishing industry here in Monmouth County and also in Staten Island. I got most of the information from interviews of about eighty people living in the County. I concentrated on people who were over fifty-five years of age. I did that so I could get back in time as far as I could get. People remember the first year or two on their first job, including a fishery job, quite clearly. But they don't remember dates in the middle of their working experience. Most of these people were retired. They loved being interviewed about their work. It was kind of interesting because most of them said that nobody in their own families is interested in hearing about their work. The grandkids didn't want to hear anything about it. They'd always wanted to talk about the old days, but nobody would listen to them. Especially their grandchildren.

Ms. Williams: That seems to be a pretty common situation where families don't listen as much as other people. That's pretty common in oral history.

Mr. MacKenzie: So when I came in with a notepad and a tape machine to record them, they loved to talk about their fishing experience. Fishing is something like farming; it's an industry that makes you sort of feel good because every day you're out catching, gathering crop. It satisfies a basic human need.

Ms. Williams: Were you commissioned this research?

Mr. MacKenzie: I did it on my own; it was my own idea to do it. I wrote an article about it in a government journal and I wanted to do it to find out why fish and shellfish are scarce now. I'd heard that they were very abundant years ago. Around the turn of the century, there was a huge oyster industry here, a big clamming industry - soft shell clamming and hard shell clamming and oystering. And there was a lot more fin fishing then, too. What happened? Why did it decline? At Sandy Hook, we try to understand all aspects of the environment, and then try to improve the habitat that these animals live in. If we know what changes have occurred, then maybe we would know then how to improve it. After that, the animals may become more abundant.

Ms. Williams: What were some of the findings of that research?

Mr. MacKenzie: Well, the bay became polluted, and that's why the oyster industry died out. It died out in the 1920s. It had been a huge industry here. It was an incredibly neat industry, because juvenile oysters were brought up here from Chesapeake Bay mainly, but some were taken out of Newark Bay and the Raritan River, and they were spread out in Raritan Bay to grow for a year and then and then they were harvested in the late fall or early winter and sold in New York City. It was very close to the market and any time the market needed oysters, boats could come right here and get them. It was quite handy. It was one of the nearest sources of a product that the New York City fish market had.

Ms. Williams: Is there a particular source of pollution that was identified?

Mr. MacKenzie: It was mostly domestic sewage pollution. Raritan Bay became infamous in the oyster business because typhoid fever was present in the bay. It had been picked up by the oysters, people ate these oysters, became sick, and some died, even people as far west as Chicago. The whole oyster industry was almost shut down in the 1920s because production along the entire coast was affected, all the way down to Florida. Chesapeake Bay oyster production was cut in half as a result of that typhoid scare that emanated from Raritan Bay oysters .

Ms. Williams: The people you interviewed must have been very emotional about this. Did you find that there were many emotions connected to this?

Mr. MacKenzie: Well, the people I interviewed didn't know too much about the oyster industry, because it happened so long ago, but the soft shell clamming fishery was shut down, and the hard shell clamming fishery was shut down. And they were extremely emotional about those. They were shattered, they felt that their whole life had been cut off. Their fathers, their grandfathers did it, they learned how to do it from them when they were children, and they grew up practicing their methods. They were proud of the type of rake their father used, and they were using the same rake. They inherited their fathers' boats. One man had just bought two rakes, and the next day they said they shut the bay, and he said that he just broke down in tears because of it.

Ms. Williams: When was this book published?

Mr. MacKenzie: 1992.

Ms. Williams: What was the name of the book?

Mr. MacKenzie: *The Fisheries of Raritan Bay.*

Ms. Williams: And how long did the period of your research last?

Mr. MacKenzie: The research and the writing took about five years. One regret that I have is that I didn't begin until I had been here for ten years and I missed ten years of early history. I wish I had gone to Keyport, the center of the oyster industry much earlier. When I went there and to Highlands to talk about the clams, everybody said, "Oh, you should have interviewed so and so, or done this last year when so and so was still alive, he was ninety-five, did it all his life, and you missed him." That was a regret that I didn't get down to interview some people when I first got here. That was a shame, I could have gone back in time another ten years.

Ms. Williams: How did you arrive in New Jersey in the first place? What brought you here?

Mr. MacKenzie: Well, I was working on an oyster rehabilitation program in Prince Edward Island, Canada for a year. We were successful in because we turned the industry around. It had been declining. The upward swing continued for about ten years; every year was better than the previous year. Now it's kind of leveled off, because there's no more ground to plant oysters on. I transferred to Prince Edward Island from the Milford laboratory in Milford, Connecticut where I'd been for fourteen years. I'd worked with the oyster industry there.

Ms. Williams: Your educational background is in Canada, I understand.

Mr. MacKenzie: No, my education was at the University of Massachusetts and William and Mary. But I grew up on Martha's Vineyard in Massachusetts. I worked my way through college harvesting shellfish there. Scallops, hard shell clams, and soft shell clams. A paper of mine about the natural history of the soft shell clam around here was published recently. I worked for five years on that project, spending about a third of my time on it for five years. And I really enjoyed doing that, because I had worked harvesting soft shell clams commercially when I was a young fellow.

Ms. Williams: So it comes full circle. You worked in this industry as a child and ending up doing research on it as an adult.

Mr. MacKenzie: I really enjoyed that.

Ms. Williams: What do you find from your historical research in Highlands, Atlantic Highlands, and Keyport? Is there any particular information that came out of that that would be of interest to the reader or the listener of this tape, about the fishing industry?

Mr. MacKenzie: At the time I began this research, the fishermen were kind of by themselves. They were thought of as pirates. People were pretty negative about them around here. And I went to them as a friend and talked to them in a friendly way, and they warmed up to me.

Ms. Williams: Why were they thought of as pirates?

Mr. MacKenzie: Well, fishermen are always on the edge of the law all the time. For example, the lobstermen can't take lobsters that are too small, they have to measure every lobster. Many keepers are just large enough. You see what I mean about being on the edge. There's a history of fishermen in Monmouth County taking undersized lobsters. Before the federal government got interested in these fish, how many fish were taken, before they started going into decline the fishery was just wide open, there were laws, but they took undersized lobsters anyway, brought them in and sold them. They sold, for about a dollar a dozen, people used to like to eat small lobsters; they're quite tender.

Ms. Williams: But they were taken in violation of the law.

Mr. MacKenzie: Yes. There's a history of violations of the law by the fisherman. Raritan Bay is a huge area here. It was illegal to use otter trawls to catch scup, or porgy as they call them here in Raritan Bay. You could use otter trawls out in the ocean, but use of them was so lucrative that they used to go out here and fish for

the scup at night illegally in the bay. There were twenty or thirty boats doing it. They fish in a little group together, and they had a watchman on one of the boats, usually a kid, who would see when a warden was going to approach them. They knew the warden's boat off in the distance, and when the warden was coming towards them, they hauled in their nets.

Ms. Williams: It's actually the illegal fishing and taking fish and shellfish from Raritan Bay that is polluted that affected people's images of them.

Mr. MacKenzie: Yes. It was a negative image of the fishermen. But they're really nice people. I used to tell them I felt they're very ambitious to fish at night. They wanted to go fishing. They loved it. They liked to make money too, but they loved it. Fishing's fun when you're catching fish and making money at it, too! It can be a fun business.

Ms. Williams: You have eighty interviews.

Mr. MacKenzie: I have tapes of about forty-five still remaining.

Ms. Williams: What do you hope to do with those tapes?

Mr. MacKenzie: I'd like to keep a few to listen to in my old age because I enjoy hearing those fishermen talk, but I'd like to donate them to somebody who would put them to good use and wouldn't destroy them. I think they're valuable. I've offered them to some people and they say, "Well, are they transcribed?" Somebody else said, "Well, write it up. We don't just want the transcriptions, we want a summary." I said I've already written a book about it. But I think the fishermen's voices and their inflections, and the way they talk has some value, too.

Ms. Williams: Right. If you had a video, too, that would be helpful. Did you ever do that?

Mr. MacKenzie: No.

Mr. MacKenzie: I'm writing an article with five other scientists, on history of the hard clam fishery from Canada, and Eastern United States to Mexico. A friend who used to work with me in Canada, is writing the Canadian part, and then we have four others in the United States in Florida, South Carolina, North Carolina, me here and a friend in Mexico. There's one separate part of it that I'd like to see written up and published in another journal. This part is in Monmouth County. We observed that in bays where hard clams are abundant, the openings to the ocean are huge. One of the openings is the Raritan Bay opening. It's wide, there's a large flush of water going back and forth. The rise and fall of tide in an ocean beach is about six feet, and in Raritan Bay it's about six feet. Down at the Barnegat Bay, which of course is not in Monmouth County, but which used to be a large producer of hard shell clams, the opening is very tiny, and there aren't many clams there anymore. The rise and fall of tide is still six feet on the beach and along the shore in Barnegat it's six inches, because there's so little water going in and out. There's been a huge buildup of human population along the shores, especially along the west shore, and they polluted the water. There are brown tides and the water gets all brown from an over abundance of plankton and the clams don't spawn, they don't grow, and those that do survive grow very slowly and their meats get black when they ingest these organisms. When the clam meat is stained black, it is called black clam. So we want to post a paper about that. These are just two examples. There are several examples of bays which have wide openings which have a lot of clams. Another bay with a small opening is Great South Bay in Long Island. It has a very narrow opening and brown tides, just like Barnegat Bay. I was just talking with one of the co-authors of this proposed article on Friday. He wants us to do it.

Ms. Williams: You said you were also going to Honduras for research. What will be the nature of that?

Mr. MacKenzie: I'm describing a fishery down there for a clam, a mangrove cockle it's called. It's a clam about two inches long that grows among the mangrove prop roots in muddy sediments. From Mexico down to Peru about

fifteen thousand people harvest these, and they are all artesian fishermen. On my vacation, instead of going to a resort or something, I go down there surveying. I came up with about fifteen thousand fisherman. I'm finding out how many of cockles fishermen get a day, how much money they get for them, how much the dealers are paid for them, and what sort of meals they prepare. I will have a section in this paper on how these fishing people live, what is their background, not just how they harvest their fish or how prosperous they are.

Ms. Williams: Have you found that they've been able to prosper?

Mr. MacKenzie: Oh, they're very poor. Just barely hanging on, just barely surviving. The girls just live with men, they rarely have a church wedding service. They have children right away. And the men abandon most of them. I don't know if the girls pick up a second or third husband or not. The men don't give them any support afterwards, and so women have to go out and harvest the cockles. A lot of men harvest cockles also, in fact most of the fishermen are men. When the kids are old enough, seven, eight, nine years old, the kids go out and harvest them, too.

Ms. Williams: It's their daily sustenance, then.

Mr. MacKenzie: Their daily sustenance. They live from hand to mouth. I spoke with three girls, teenagers walking down the street in El Salvador with cockles. Each had maybe thirty or forty, and they'd just come in from harvesting. I said, "You girls go every day?" I wanted to find out how often they go. "Oh, we have to go every day to eat." They were on their way to sell these, get some money, then go buy food to eat that day. They had to go the next day. If they didn't go the next day, they wouldn't have any money for food.

Ms. Williams: You're performing a very important service by making sure that they have the ability to keep that going.

Mr. MacKenzie: I'm describing this fishery and also trying to describe how these people live, and how much money they have. There are shrimp farmers who have gone down there and ripped out a lot of the mangroves, especially in Ecuador. They didn't care anything about these cockle fishermen.

Ms. Williams: Are there any guidelines or laws?

Mr. MacKenzie: No. The government of Ecuador is trying to slow down the destruction of the mangroves, but the fishermen say that they're not going to stop. They pay local help to work at a minimum wage, which is about three dollars a half a day. They get almost that much for a pound of shrimp.

Ms. Williams: Well, it's important information to keep these communities going.

Mr. MacKenzie: I hope so. I've been down to Honduras twice already, and there seems to be a need for a third time. When I went to see these people a second time, they asked, "When's the help coming?" They think I'm going to bring help. They are always friendly. As I talk to these people they enjoy it and laugh to relieve them of their poverty, but it's tough to do that.

Ms. Williams: Do you find the people here are interested in that research, then, when you come back? Do you have a group of people supporting it?

Mr. MacKenzie: Not particularly - a little bit.

Ms. Williams: What about Sandy Hook? What have you been doing there?

Mr. MacKenzie: Let me just tell you one more thing about Ecuador. I submitted the paper to my superiors at Woods Hole, and I thought a sensitive part would be the effect of the shrimp farms on the mangroves. I thought it seemed a little delicate to get into, but they passed right over that. What they felt was very sensitive was how these people live.

Ms. Williams: You mean they didn't want to talk about poverty or the situation they're living in? That's integrated with the lifestyle and the fishing.

Mr. MacKenzie: I argued with them, saying, "I want to put this in there, it's all accurate, I feel it's all a good report." And this man said, "Well, alright, we'll show it to an anthropologist on the staff here, and if she says okay, we'll do it." And she said okay, because she thought it important to provide the background of how these fishing people live as I do. A friend of mine here on the staff said, "You ought to describe how the fishermen here in Monmouth County live, what kind of homes they live in." I think that's going to be the most interesting part of this paper. This cockle fishery has never been described before in international literature. I'm hoping that more people go down there and see avenues of research in the mangrove areas of Latin America, not only of the biology of the cockles, but also to get involved in community development.

Ms. Williams: What about Sandy Hook and what you're doing there?

Mr. MacKenzie: I spent five years working on the biology and habitat analysis of the soft shell clam, and my paper about it just came out. We want to see if we could restore the habitat of the soft-shell clams. The clams are scarce here now, although they used to be abundant.

Ms. Williams: What were your research findings?

Mr. MacKenzie: Well, for one thing, there was a huge die off here in 1995 as a result of a very hot summer. Maybe a quarter million bushels were killed off when fishermen were just starting to harvest them. It was terrible. I'd been studying those clams since they had just set and following them every month. I observed them, all dying in the heat, and I almost cried when I saw that. Another thing, I'm sure it has been going on for centuries, is that the killey fish eat the juvenile clams. Each fish will eat maybe thirty, forty, fifty a day.

The South shore of Raritan Bay had washed away slowly when at very low tide, a man made a survey here in 1878. The flat from the shore extended about a mile, now there's no flat there at all in a very low tide. At low tide, waves are breaking right against the shore. I'm giving a talk on the twenty-fourth or twenty-fifth in New York. There's a conference being held as a result of the population increase and all the nitrates in the water. There's been a huge increase in the amount of sea lettuce. It grows out over clams and other animals living in the sediments and smothers them, kills them. People contribute nitrates to the water which supports the sea lettuce.

Ms. Williams: Do you visit Sandy Hook as a consultant? You're getting a lot of important data from people. Are many people actually implementing your suggestions?

Mr. MacKenzie: It's weird. Authorities implemented my suggestions in Prince Edward Island, implemented my suggestions in Connecticut when I was there, and helped build oyster production in Connecticut. But here, I don't know. There are so many people, so many different agencies and groups involved with the habitat around here, it's difficult to do anything. I talk to people about the sea lettuce and they said, "Well, you can't remove that because the American Littoral Society will protest against it. It's a natural phenomenon that's growing." And I say it really isn't, it's growing there because of all the nutrients in all the waste that's going in the water. "No, no, we can't do that." But there are at least six groups of people here in the County who each think that they are the manager of these resources.

Ms. Williams: There are a lot of things that are getting in each other's way.

Mr. MacKenzie: There's the Bay Keeper, which is part of the Littoral Society, there's the Audubon Society, there's the State DEP, there's the Monmouth County Environmental Association, and the Monmouth County Water Resource Association. They all sort of think that they are the appropriate managers. In

addition, the National League Fishery Service is involved. Each group thinks that it's the main one.

Ms. Williams: That makes for a lot of complicated decision making. Sandy Hook has had those festivals for Clean Ocean Action, and they seem to be trying to keep things more public as far as getting people's awareness up.

Mr. MacKenzie: I just submitted my paper on the soft-shell clam and the sea lettuce to Curt Moore in the Asbury Park Press Friday to see if he'd be interested in writing an article about my findings.

Ms. Williams: Do you teach?

Mr. MacKenzie: No, I don't. Just write papers, send them out, and give talks around the meetings. I try to keep my own research as practical and usable as I can. I grew up in town with people who were poor back in the 1930s. There was a laboratory only twelve miles away, with one of the top shellfish researchers in the world, Paul Galtsoff, who didn't add one individual shellfish to the waters of Martha's Vineyard. I said, "If I ever get in there I'm going to work on practical problems and try to add shellfish to beds as best I can."

Ms. Williams: Would you say that your family experience has influenced you a lot to go into this in terms of how you as a child worked?

Mr. MacKenzie: Yes, definitely.

Ms. Williams: Were there many hardships in your own family experience?

Mr. MacKenzie: Well, we were short of money. It took me two years to complete my freshman year. I worked two years as a shellfisherman. In fact, I worked on boat during one fall. I went to college two spring semesters to get through freshman year.

Ms. Williams: So you were supporting yourself to go through school?

Mr. MacKenzie: No, my family paid most, but I earned a lot of it by working in the summer hard-shell clamming and soft-shell clamming.

Ms. Williams: You've lived in New Jersey since 1973. What have you seen in terms of positive or negative changes in Monmouth County environmentally, community wise, socially. Any insight in terms of changes?

Mr. MacKenzie: I don't see anything negative here in the community. Everything's pretty staid. I see an older woman next door about every five years. She says there was a film done about Red Bank in the 1933, as a matter of fact I have it. I bought it because I wanted to see what life was like about the time I was born. She said the town looks the same now as it did then. Same houses, including this house here. There are very little changes as far as actual buildings. There's been more build up along the shore though; a lot more apartment buildings in the last twenty-five years or so.

Ms. Williams: So actually she didn't feel too much of the change.

Mr. MacKenzie: No, Red Bank looks about the same as it did then.

Ms. Williams: Well, it seems that you are someone very appropriate for this research of the Millennium, because you've done so much in terms of providing research about the fisheries and the Highlands, and Atlantic Highlands, and Keyport, and you have a lot to add to this archival collection for this Oral History project. Are there any particular insights or messages that you'd like to make sure are included? Any message to our future generations that may come out of your work or your living?

Mr. MacKenzie: People say, "You're just interested in the commercial fisheries around here; what about the environment?" I asked the head of the American Littoral Society, "Are you interested in keeping these fisheries going?" Well, he thinks as I do, that commercial fisheries were the first industry in the United States, and we should try to keep them going. I don't want them to die out.

Ms. Williams: That's certainly a wonderful mission, and also many families have built their traditions and futures on commercial fishing, and it's very painful to see it die out. It should be preserved as much as possible.

Mr. MacKenzie: The hard-clam fishery in Sea Bright and Highlands is now one of the most prosperous fisheries going in the Eastern United States. The fisherman come from the local areas, but also farther south. They drive up here from Brick and other towns down that way. We're trying very hard to keep that going. In fact, another fellow and I just came up with an important observation: Hard clam fishing has erupted here during the last ten years, and we're trying to figure out why. It turns out that starfish disappeared about the time it erupted, and starfish prey on the juvenile clams. The same thing happened in Connecticut. I was in Connecticut and went out on a boat up there, and this man said, "The clams here, they're spread out way farther than they ever used to be." And I said, "There's got to be a predator missing here, something died out." And I didn't think of starfish at the time, but the same thing happened here. It turns out that starfish died out in Connecticut also.

Ms. Williams: It's so intricate how everything connects, and that you need to know one thing to understand the other.

Mr. MacKenzie: We wrote an article in the Asbury Park Press, saying that if we want to save this clam fishing we're going to have to control the starfish. We have another thing going this winter. Environmentalists over in Staten Island convinced the State to stop blue crab dredging in the wintertime over in Staten Island, because they say that the dredging harms the invertebrates on the bottom, reducing their abundance. But they didn't have any data on it at all. They've been dredging for well over a hundred and fifty years or so, used to do it with sailboats, schooners, and sloops. The same folks who harvested and farmed oysters, used to dredge these crabs in the wintertime. So this winter we want to have an experiment to find out if the dredging actually does reduce the abundance of vertebrates. I doubt it does.

Ms. Williams: It's exciting to do applied research that you know is going to help quality of life.

Mr. MacKenzie: We like immediate results, and I hope we can get the law changed immediately.

Ms. Williams: People have to trust people's vision.

Mr. MacKenzie: I'm trying to think ahead all the time. We're asked to get involved in gear effects. What effects do gear like the surf clam dredge have on the environment? Another thing we're doing right now, in fact we want to pack some samples tomorrow, is the effect of hand raking on clams on the habitat.

Ms. Williams: This has been a very informative interview for me, and I'm sure the listeners and readers will find this extremely educational. Anything else you'd like to add before we close?

Mr. MacKenzie: I'm a familiar figure around here. I walk into Red Bank almost every day. People see me walking and they say, "Oh, I see you are walking again." I try to keep myself going and active by exercise. You asked about the other changes. I notice the turn-over in the ownership of stores in Red Bank has been proceeding at an accelerated rate.

Ms. Williams: Absolutely. Well, you've certainly contributed a lot by improving conditions and living conditions through your research, and Monmouth County's glad to have you here.

Mr. MacKenzie: Well, it seems like you work and work and there's no result from it, but I guess there probably is some. Somebody said, "Clyde, you write so much. You publish and you publish." Seems to me I work a lot at writing, but I infrequently see it come out.

Ms. Williams: One thing is that you will never know fully all of the people reading and utilizing it. That's being the author. You can't necessarily know what people will be implementing suggestions in your writing.

Mr. MacKenzie: I estimate ten people around the world will read one of my papers.

Ms. Williams: That's ten more communities that are being helped. Thank you so much, Clyde, for your time in this project. I know that the reader and listener will benefit a great deal from your knowledge. so thank you again for giving your time for this.

Mr. MacKenzie: You're welcome.