

Debbie Harrison: There was nobody out there. The colors were so vivid and the clarity was unbelievable. The birds were unbelievable. There were the prop scars and the sea grasses were green. But you would go back through there and the colors...

Karen DeMaria: I was driving across the bridge today, the Seven Mile Bridge. I am looking around, and it is like every shade of green you can think of, right?

DH: Yes.

KDM: The first thing that came into my mind, I think, it is how I am going to open up my paper. It is that little nursery rhyme that says "Brown, brown, run aground. Green, green, nice and clean." I was like, "You know, that nursery rhyme does not go anymore." [laughter] It does not fit. Now, it is like dark green, light green.

DH: Yes. Murky green.

KDM: The color has changed even since I have been here, and I have only been here five years as far over the bridge is. Because I used to remember going over to Seven Mile Bridge. It was one of those things on a nice day, go across the Seven Mile Bridge. There was beautiful blues, and the greens, and the sea grasses, and the white. The whitest were the sand flats. It was like as you drive across, it was like, "God, I am so happy to be alive." You just felt so good. Now, it is like I do not feel good going across that bridge. [laughter]

DH: That experience, when I thought back to that experience and its sight, just this -- the aesthetic beauty of being in the back country fifteen years ago. There was a year when I left the Keys. It was the end of 1984. I came back in the middle of 1986. I went home because my mother was dying. I spent a little over a year with her. I said, "You know what George, from the time that I came back in 1986, it's never been the same." I've never had that experience. This is the back country, you go out there and the waters are murked up. All you can see are prop scars everywhere. There are boats buzzing all over the place. I mean, it's just destroyed. It's truly, to me, the back country more so than the reef. I mean, George loves the reef. I love the back country. I've always loved the back country. I've always thought it was the most spectacular, the most unique, natural setting...

KDM: I have never spent much time back there because we do not have a small boat. We only have the big boat. That is like I keep daunting Dawn, "I want a boat. I want a little boat to go to play in the back." That is it, that is all I want.

DH: [inaudible] within thirty-five [inaudible] and you're in heaven. But you're not in heaven anymore. It's not. I mean, people are buzzing all around you and there is no peace and there is no serenity and the water is just all fucked up.

KDM: All right. Well, let us get going here.

DH: Okay.

KDM: How long have you been a resident of the Keys?

DH: Fifteen years.

KDM: What area of the Keys?

DH: The Lower Keys. Always the Lower Keys. From Key West to Big Pine Key.

KDM: That was full-time residence, the fifteen years, correct?

DH: Yes, except for that year that I went back to Michigan to be with my mother. Actually, I kept my residence here. I just was gone.

KDM: How old are you?

DH: Forty.

KDM: Graduated from high school?

DH: Yes.

KDM: College?

DH: Yes.

KDM: Four years?

DH: Yes.

KDM: Graduate school at all?

DH: Had one year of graduate school.

KDM: Presently employed as?

DH: Do you want my title or what I do?

KDM: Both.

DH: Florida Keys associate for the Wilderness Society. Basically, a planner and an environmental lobbyist.

KDM: How long have you been doing this?

DH: Four years. This will be my fifth year.

KDM: What did you do before that?

DH: I worked as a planner for the Florida Keys Land & Sea Trust. Before that, I was a planner for [inaudible].

KDM: And before that?

DH: I've had a lot of different odd jobs. I did some grafting. I did some hotel/motel work.

KDM: You told me that you had worked on a lobster boat.

DH: Worked on a lobster boat. A lot of the time, when I first got here, I was doing different jobs in the hotel/motel industry part time and working on lobster boats part time. Although, I consider that more fun than work I never got paid work.

KDM: [laughter]

DH: [laughter] I thought that my betterfoot was being able to go out in the water. [laughter]

KDM: Now, you mentioned to me that you spent a lot of time in the back country, right?

DH: Yes.

KDM: You would go out diving on the reef?

DH: I have been a certified diver since 1983. Prior to diving, I used to snorkel mostly around Pelican Shoal and Sand Key Light.

KDM: Dive at Sand Key, really changed now.

DH: I actually went there four or five years ago when the little [inaudible]. I didn't believe how disgusting it was. I just couldn't go back. It just nothing. There was just nothing to see but rubble. Disgusting. I mean, Looe Key is still pristine compared to Sand Key. It's disgusting. I couldn't go back. I was heartbroken.

KDM: So, back country, diving on the reef, Pelican Shoal, Sand Key snorkeling. Tortugas or Marquesas much?

DH: I've never been to dive Tortugas. When I used to go out on the fishing boats, we would go as far as to Marquesas. It was usually from American (trawl?) to the Marquesas, would be the area that they would be fishing.

KDM: Was it mainly ocean or was it ocean and Gulf?

DH: Just ocean.

KDM: You do much fishing or you do pretty much diving there, would you say, with your experience on the water?

DH: Right now? Right now I don't really do...

KDM: Well, actually, through the whole fifteen years.

DH: I don't fish at all. I would just say snorkeling, diving, and boating, yes.

KDM: Enjoying the...

DH: Swimming.

KDM: Have you ever been a volunteer involved with the water like Coast Guard Auxiliary, advisory councils, fishing tournaments, that kind of stuff. [inaudible] off, FCA. [laughter] Let us talk about fishery first, or fishing.

DH: Okay.

KDM: What have you noticed with fish? Have you noticed anything different with the fish?

DH: In comparison, the thing that I have noticed or most aware of, I think it would be a decrease in size in the lobster that are coming in. It seems like for the last six or seven years, the number of lobster that are coming up in troughs just seem to be reduced from when I was first here. The pounds per trough.

KDM: Right. Catch per unit differed.

DH: Yes.

KDM: [inaudible]

DH: In terms of other fisheries, I don't think that I would be the person to ask for comparison because I was just really enjoying them.

KDM: Right. Well, that is why I figured we would start with that because that is something you have less knowledge on.

DH: Yes.

KDM: It is just so we can get that out of the way. [laughter]

DH: Yes.

KDM: You have not noticed really or you do not really think you would have enough experience of saying any comments about fish of any...

DH: Like the size of jewfish.

KDM: What about the size of jewfish?

DH: Actually, I think that the jewfish...

KDM: Did you used to see big ones?

DH: I used to see big jewfish. I remember Jim would be able to bring in somewhere like a 250-pound jewfish that he donated to the Key West Aquarium. Just in my experiences diving around the reef from the wharfs, five or six years, I just had never had that experience. I can't say that I had it often when I first came to the Keys, but I had it a lot more than I have now. I mean, I just have not seen it.

KDM: What about tropical fish?

DH: I haven't really noticed a difference in tropical fish because I never did any diving until 1983, [19]84. So, when I first got here, I wasn't down in the reef looking at the numbers of angelfish and the numbers of parrotfish. So, I don't really think that I'm qualified to make a comparison on that.

KDM: Have you ever observed fish kills?

DH: I remember in 1980, I was living in Big Coppitt Key and it was in July. There were a lot of people calling for scientific investigation into what are now we were referring to the red tides because there was the fish kill going on. If I recall, it was thought that it was coming from the Atlantic side. That's the only time I ever really saw that. I don't know what the resolution of that was, what was causing that, but I remember there were newspaper articles about it too.

KDM: Do you live on a canal?

DH: Yes.

KDM: [laughter] You said before that you have noticed some definite changes in what has gone on in your canal?

DH: Yes. Yes.

KDM: Expand on that.

DH: Well, I moved up to Big Pine Key in 1986. We used to swim in the canal a lot all year round. As a matter of fact, George, he'd swim the canal every morning as his exercise. I remember thinking when I first moved up there that ours was one of the cute canals on Big Pine. It really was still clean. Part of it was because there were very few houses on our canal, and part of it was because the houses that were there, generally, were not lived in. They were stock

houses. Part of it was that our canal faced west so we didn't get a lot of the tide – the seagrass coming in. Part of it was that our house was towards the end of the canal that it faced out into the open waters. So, we had a lot of flushing going on. But I remember a lot of times – and George used to do a lot of underwater photography. He would be taking pictures. His focus was on little microscopic things along the canal. What do you call those bristly little things? They attach themselves to canals. Sort of like the grass and sort of...

KDM: Now, do the microalgae, anemones, and stuff.

DH: Just like the microalgae and anemones and stuff. I remember how clear it was and how pretty it was and how everything seemed to belong there. Then about, I think it was three years ago – maybe two years ago, but I think it was either two years or three years. All of a sudden, these long strands that looked like a rope started growing up the algae that were along the sea wall. They were sort of a yellowish green and they just went on and on. The longer they got, the stringier they got. So, I started walking up and down the canal. By this time, the houses were starting to get filled up with residents. There was a lot more development, and the waters around our house, not just in our canal, but because we were so close to the end of the canal. The waters were starting to get greener and we were losing a lot of the clarity that we had had.

KDM: What was the bottom of the canal like? What was on the bottom of the canal?

DH: Basically mud.

KDM: Is it a deep canal?

DH: It's a deep canal. I think it's fifteen feet. Real silty.

KDM: You remember back when you first moved on the canal on, say you got a windy day, a real windy day, the canal would get stirred up or would it get stirred up from the wind?

DH: Yes. There were times if we had a northwesterly, that we would have the water coming in. I don't recall back then if we would lose our visibility.

KDM: What about now? Today, if you went home today and looked out there. [laughter]

DH: There is no visibility. There is no clarity.

KDM: It is always that kind of greenish?

DH: Murky, yes.

KDM: Does it look like there are sediments suspended in the water or?

DH: Well, it's both that sort of medium light green that you can't see through. It could be sediments. It could be...

KDM: I was just wondering if you noticed particulates yourself. I have had people in other places say that they have seen things floating by and particulates in the water. But of course, it is more where they are getting more of the influence of the wind and things.

DH: For us, it's really the color and the loss of visibility. I don't see anything that you could look at and say, "Oh, well, that's a small, brown piece of..."

KDM: Have the microalgae disappeared and the anemones and the other...

DH: I have not seen the anemones. I don't see them on the canal anymore. The fish populations that used to be in our canal I think have decreased in number and in types. I mean, now, it's an odd thing to see an angelfish on the canal. There were a whole host of them out there. There used to be barracuda and we still get the little ones that we catch and feed to the pelicans. But it's just gone. It used to be that if you were on the (Bow Basin?) and you were looking down into the water, you could see you almost to the bottom. I remember one time in 1986, a friend of mine brought her kids up to go swimming. Her son's lenses fell out of his glasses into the water, and we found them. It wasn't easy, but we found them. That would never happen today. I had a niece down last week, dropped a wide ring into the canal. George went down and spent an hour down and he couldn't find anything.

KDM: How about jellyfish?

DH: We don't generally have jellyfish in our canal very often. I don't know if it's because of the configuration and the way it faces.

KDM: What about the water clarity and quality in other areas? Maybe the reef or the back country, pick an area.

DH: Pine Channel. Let me talk about seagrasses in general. Back in the late [19]70s – am I skipping this too far ahead? Do you want me to go over? I can go over.

KDM: No, you can go – I just have to find the right area so I can make the notes.

DH: Okay. No, if you want to go through this, I can come back then.

KDM: No, let us talk seagrasses. I'm here. [laughter]

DH: Okay.

KDM: Go for it.

DH: Okay. It used to be...

KDM: Pine Channel, right? No.

DH: Way back, when I used out and I spent much of my time in the back country between Key Haven and Big Coppitt, actually, all the way up to the (Sunset?) Key. When we used to snorkel around back there, the seagrasses were really green and they weren't covered with all kinds of gunk. I mean, it was very distinct. It was a very distinct ecosystem. It was very free flowing. The fish would go through it and it was just distinct. Now, when I go out into Pine Channel and I'm snorkeling around, and all the way up Pine Channel, and in many places in the back country of Big Pine. I assume that it's probably the same going further west, but it's almost like – at our cottage, we have this bank that's been taken over by vines. It reminds the seagrass has been taken over by these algae. I mean, it's no longer these unique little distinct stems of grass.

KDM: What does it look like? What color?

DH: It looks brownish to me and it's just growing all over it, taking over. It's like it's smothering it. And the seagrass – part of it is that the visibility isn't as good. So, you don't have this really clear water that you're looking through. You're looking at this unique habitat that's totally distinctive to itself. But it just looks like somebody threw a whole bunch of filth in the water, and the sun coming down in it, and you're looking through all the filthy stuff. What you see are a bunch of seagrasses that at one time in their life would probably grew a pretty green that are now just covered with this stuff. These algae are growing all over and it's just –

KDM: When did you notice that?

DH: I think I became real aware of it in 1987 or [19]88, is what I'm really thinking.

KDM: Was this on mainly turtle grass or would you notice with the Halodule and [inaudible] and the other grasses?

DH: I noticed it mainly with turtle grass.

KDM: Is there anything else about the turtle grass bed? In the old days, what else was growing with the turtle grass beds? Was there anything else growing in there or is it just grasses and fish?

DH: Well, there were the sea urchins and there were the sponges.

KDM: Was it shortspine sea urchin? The ones that put shells on there and carry around little pieces of stuff with them?

DH: Yes.

KDM: [laughter] I just remember seeing that.

DH: It reminds me of a story my son keeps telling in the library all the time of all the [inaudible] crab or on the crab [inaudible].

KDM: [laughter]



DH: But I guess that's the difference I see, is mostly that I just haven't been out in a long, long time when number one, the clarity isn't there. I mean, I noticed that right up there. Then everything just seems to be covered in gunk. Being a compulsive cleaner, I just want to go dust it all off.

KDM: Is it like dust, like a silt also besides the algae? Or are you seeing a buildup of sediments?

DH: I think both. Both. Yes.

KDM: You say you spent time in the back country and stuff. Are you seeing areas that have changed because of silting?

DH: I've seen areas that don't have seagrasses anymore.

KDM: Where about? What areas?

DH: Big Pine is a just a mess that all the channel markers are gone. But there are a lot of places going off Big Pine where I think – my assumption is it's because of prop scarring and the turbidity in the suspended sediments that we're not seeing – we're just seeing those seagrass that's wiped out and they are not regrowing.

KDM: So, you would say pretty much right around the north part of Big Pine Key area?

DH: Yes.

KDM: Would you attribute that to when they removed the channel markers?

DH: I think it's gotten much worse, but I think it was starting before then. I think the amount of activity, when I talked about the difference before, to me, what I remember in my pre-1985 days and what I saw when I got back, it just seemed like that for me is a really easy break in the timeframe because I was gone for a year. So, thinking in terms of pre or post.

KDM: But it seems that then that there was a natural definite break anyway. Things were better before and...

DH: Yes, because all of a sudden, you get back and there's just all this increased boating activity and the amount of development. I mean, Big Pine key was growing like a mad house during that decade. It was when the Seven Mile Bridge finished completion. As soon as that bridge was opened up, all of a sudden, you see a ninety-three percent increase in growth. Statisticians will tell you that in the 1980 to 1990 census, we saw a ninety-three percent increase in growth. But really, that growth wasn't from [19]80 to [19]90. It was from well into 1982 to 1990. That's when it happened. What I think happened is that at the same time that we're seeing this massive growth and all of a sudden, we're seeing just this tremendous increase in diving activity and stuff. So, Florida in the popularity it brought scuba diving as a sport. I mean, I know I got certified in 1983. I know how many people wanted to take those classes, and I know how many

people were actually certified before that. I mean, I don't know the actual numbers, but I know that that was really the crust of people getting into scuba diving as real popular, general average person activity. Before that, I think they were much more difficult. All of a sudden, these resort courses are booming up before the Key community [inaudible].

KDM: It is almost sort of like the Keys are being loved to death, you know?

DH: Yes.

KDM: That saying is coming true.

DH: Yes.

KDM: Overall, have you noticed an increase or decrease in seagrasses?

DH: Decrease.

KDM: Are the seagrass beds denser now than in the past or have they become sparse?

DH: More sparse.

KDM: Prop scars. So, I knew we were going to get to it. [laughter] You mentioned a little earlier about the prop scars. Have you noticed an increase or decrease?

DH: Increase.

KDM: What are locations of some areas that are badly scarred?

DH: The shallow waters west of the Florida Keys.

KDM: All of them? [laughter]

DH: All of them. I can't believe, flying over Keys, I just can't get over it. I just can't get over what I see.

KDM: You said you were saying that story that you were telling George about you remember when you went in the back country –

DH: Oh, yes.

KDM: – and how beautiful it was and –

DH: Nobody was there.

KDM: When do you think the prop scars started – I mean, obviously, it would be associated with increased boating activity and stuff like that.

DH: Increased boats.

KDM: But I was just wondering when it is when you started noticing it? I mean, I can ask (Craig Crew?) this question. He will come up with an exact month. [laughter]

DH: I don't remember seeing the kind of prop scars even in 1985. I mean, we would see an occasional prop scar. I remember asking a friend of mine, "What is that?" It was such a rarity to see it. When I got back here [19]86, gosh, we wished we were going out to the front country to the reef. I remember certain areas seeing increased prop scarring on Big Pine because Pine Channel has areas that are so shallow, particularly right off the Big Pine. So, there were areas that from the day I got back and started spending time on Big Pine, I was seeing the prop scarring.

KDM: So, it seems like it was more noticeable the post [19]85.

DH: Yes, for sure. Absolutely, but I can't remember what year. I can't remember if all sudden in 1988, 1989, everybody went wild with prop scarring. But...

KDM: Have you noticed when you are flying over, are there areas that seem to be particularly bad? I mean, you said all shallow water areas, but is there areas that stick out in your mind?

DH: Sure. Holiday Isle. All the waters surrounding Holiday Isle, both on the front side and the back side I think are just in terrible, terrible shape. The areas north of Big Pine Key and heading out to Sawyer Key. I think there are a lot of areas that are in just terrible. I think some of the areas coming into the Snipe Keys, which are such a popular area right now. The Mud fires, the Mud Keys, I think those are in disgusting to shape. Some other areas. I haven't spent any time in the water around Key West in years and years. So, I really don't know that area.

KDM: Is there any other comments you want to tell me about seagrass beds or seagrass communities before we go off on something else? Do you want add any stories, any differences?

DH: I was telling George a story last night about a day that a friend of mine took me out boating in 1981 in the back country. We had gone out to Snipe Key. He was a (cop?) So, he knew the water pretty well. We had sixteen-foot pole that we [unintelligent]. And he ditched the boat. He said, "Let's go for a walk." I said, "Aren't you going to sell [inaudible] since the tide's is down really fast." That was before the [inaudible] coming in. There was this strong wind out of the south. We turned around. We'd been walking along the beach. All of a sudden, we turned around and the boat was gone. I mean, it was probably by this point a hundred, maybe 150 yards off shore because the wind was blowing it away. This guy started going after his boat. I kept yelling to him, "We'll get help. Don't worry about it. We'll get help. Don't swim after swim after the boat." It just kept going further and further out. Coming back, there was four [inaudible]. He kept swimming after the boat and I watched him for forty-five minutes going after this boat. Every time he would get close to that boat, that boat would get picked up by the wind and it was gone. It was going further and further and further out. I remember looking around for help. This is a Sunday afternoon and it was in April 1981. It was about 3:00 p.m. on

a Sunday afternoon. There was one fishing boat out there. It was probably half a mile away from us. Then looking to the East and looking to the West, way, way, way off, there were a couple of recreational boats that were there. We couldn't ask those people on the fishing boat for help and they tucked up and they were gone before we could get to them. I could see that they were leaving. So, I decided I would start walking west. I walked for three hours. Of course, all I had on was my bathing suit. I didn't have my shoes. We'd just gone off the boat walking on the sand [inaudible]. So, I didn't have any sandals or anything.

KDM: [laughter]

DH: Well, I hadn't intended on going anywhere. My feet started bleeding from walking over the corals. But every time I tried to go out in the water where it was softer in the sand to walk, the nurse sharks were all over me. I mean, they were just everywhere because there was just movement and there was – my feet were bloody and I couldn't find anybody to help me anywhere. There was no one out there. So, I kept walking. I kept walking. Then I finally got to a channel between the left of the island. I'm trying to get over flat area that was so deep and the current was so strong because the tide was coming back out there that every time I tried to cross it, it would've pulled right out. So, I couldn't cross it. So, I was stuck standing there and I [inaudible]. By this time, the sun was almost setting, and I can't even...

[end of transcript]