

TRANSCRIPT

INTERVIEWEE: Jesse Cancelmo

INTERVIEWER: David Todd

DATE: March 8, 2024

LOCATION: Houston, Texas

SOURCE MEDIA: M4A, MP3 audio files

TRANSCRIPTION: Trint, David Todd

REEL: 4196

FILE: FlowerGardensReef_Cancelmo_Jesse_HoustonTX_8March2024_Reel4196.mp3

David Todd [00:00:02] All right, well, good afternoon. I'm David Todd, and I have the privilege of being here with Jesse Cancelmo.

David Todd [00:00:08] And with his permission, we plan on recording this interview for research and educational work on behalf of a small non-profit group called the Conservation History Association of Texas, and also for a book and a website for Texas A&M University Press, and finally for an archive at the Briscoe Center for American History, which is at the University of Texas in Austin.

David Todd [00:00:33] And, he would have all equal rights to use the recording as he sees fit.

David Todd [00:00:38] And, I wanted to make sure that that's okay with Mr. Cancelmo.

Jesse Cancelmo [00:00:44] Yes, it is.

David Todd [00:00:45] Okay, well, then let's get started.

David Todd [00:00:48] It is Friday, March 8th, 2024. It's about 1:15 in the afternoon, Central Time.

David Todd [00:00:56] My name, as I said, is David Todd. I am representing the Conservation History Association of Texas, and I'm in Austin.

David Todd [00:01:04] We are conducting a remote an interview with Jesse Cancelmo, who is based in the Houston, Texas area.

David Todd [00:01:12] During his career, by day and during the week, Mr. Cancelmo worked as a mechanical engineer for storage facilities, tanks, terminals and so on in the energy industry.

David Todd [00:01:24] But he also had a very big sideline of work as an author, a photojournalist, a lecturer, with a special interest in wildlife and the underwater world. As I understand it, he's been diving since 1969 and has shared that experience through photos and over 120 articles, that have appeared in a variety of magazines including Dive Training, Scuba Diving, Diver, Sport Diver, Underwater USA, Oceans, Texas Diver, Skin Diver, Alert Diver, (there's still more) Scuba Times, Texas Parks and Wildlife, Texas Highways, National Geographic and Newsweek, plus other publications such as USA Today, the Houston Chronicle, and the Houston Post. He's also managed to publish several books, including of special interest here, Texas Coral Reefs, back in 2008, and Glorious Gulf of Mexico, in 2016.

Jesse Cancelmo [00:02:23] For years, he has had a special interest in the Flower Gardens, where he served on the Flower Garden Banks National Marine Sanctuary Advisory Council for a decade and was recognized as the volunteer of the year in 2015.

David Todd [00:02:37] So, today we'll talk about Mr. Cancelmo's life and career to date, and especially focus on what he can tell us about the Flower Gardens, and the associated reefs that are not too far from there, in the northwest Gulf of Mexico.

David Todd [00:02:51] So, with that little introduction, skimming the surface, I thought we might start with a question about your childhood. I understood that you spent your early years in Philadelphia, and I was wondering if you could point to any people or events in your life in your young years, where you might have gotten interested in animals and conservation and perhaps oceans.

Jesse Cancelmo [00:03:16] Okay. David, yes, I grew up in the Philadelphia suburbs, and when I think back at growing up there as a young teen, as a young teenager, my dad was, his hobby, his early hobby, was pheasant hunting. He was a hunter. And he took me pheasant hunting several times. And when I turned 16 years old, my dad bought me a 20-gauge shotgun and a .22 rifle.

Jesse Cancelmo [00:03:47] And I did some target practice. I went hunting, I think, maybe 1 or 2 times. But, not long after that, my dad took up sport fishing and the guns went in the gun rack, locked up, and he bought a small boat, a fishing boat.

Jesse Cancelmo [00:04:08] Well, when I got on that boat, it was just a really bright light. And boating ... And he got into fishing and he took me fishing. I went with him. I was 16, 17 years old, and he needed a fishing buddy, so I would go. But the boating was really, really my, just ... I loved it.

Jesse Cancelmo [00:04:33] And it started kindling my relationship. This was really where my relationship with the ocean began, my love for the ocean and just being out there in a boat.

Jesse Cancelmo [00:04:46] The fishing? I fished. But it was kind of ... I had younger brothers that were much more eager and interested and passionate about fishing. But I, I just was kind of so-so about the fishing aspect.

Jesse Cancelmo [00:04:59] But what happened was when I became about 17 years old, 17, 18 years old, I bought a surfboard. And boy, I was totally into surfing. This was ... then my connection with the ocean was just going up and up, because I spent every summer riding waves on the East coast in South Jersey - Cape May, New Jersey.

Jesse Cancelmo [00:05:24] And, in 1969, I went on a surfing safari with a buddy, with a surfing buddy of mine. We went to California. We surfed Southern California. We went down to the, across the border, down into the Baja Peninsula. We went down in Mexico to K38, which is a hot surfing spot, at least it was then, 38 kilometers south of the border.

[00:05:48] So, I would say this: these activities that I just described really set the stage for me and my connection with the ocean.

David Todd [00:06:02] So, I think you mentioned that just the experience of being out there was a powerful one. So, it's kind of a feeling of release and escape? Or how would you describe what it's like to be on a boat or a surfboard, for that matter, for you?

Jesse Cancelmo [00:06:20] Well, just a real comfortable feeling. And, it's also, and I don't know, when I was really young, whether I could say it felt therapeutic, but I can say now it certainly is a therapeutic type of experience - surfing and boating. And those two, well, I'll tell you in a little bit, what happened with the surfing, but just being in the ocean, semi-submerged with my legs surfing, or, you know, or even out of the water in a boat, and just feeling the roll as the boat moves through the waves. It was just, I just recognized the ocean as a place that was, that I had this attachment for.

David Todd [00:07:18] That's great.

David Todd [00:07:21] So, it sounds like you had these real-life experiences in the great outdoors. Did you also have any sort of experiences with books or TV shows or movies or other kind of pieces of the media that might have been influential in getting you started with your interest in oceans and outdoors, wildlife and so on?

Jesse Cancelmo [00:07:45] Oh, absolutely. Okay, as a surfer, I'll start there. As a surfer, "Endless Summer", the movie, was by far, it had just a huge impact on furthering my passion for the ocean. And, then TV shows that kind of galvanized my passion, I'll start off with "Sea Hunt" with Lloyd Bridges, who was Mike Nelson in Sea Hunt, and of course, the "Undersea World of Jacques Cousteau", the television series. That was, I mean, that really sticks out as, further increasing my passion for the ocean and marine life in the ocean.

Jesse Cancelmo [00:08:38] But one other I might mention, and you may or may not recognize this one. But when I was in my late teens in Pennsylvania, there was a man (he was young at the time), but later became a real icon in the SCUBA diving industry. And his name was Stan Waterman. And Stan Waterman was from Princeton, New Jersey. And what he was doing (and this was back in the oh, gosh, this is in the 1960s, late 1960s, in early '70s), he was traveling to the country with 16-millimeter films that he had made.

Jesse Cancelmo [00:09:23] He was a filmmaker, and he and his family were documenting SCUBA diving adventures in the Bahamas. And I saw one of his films in Valley Forge, Pennsylvania, yeah, in the late '60s, early '70s. And it was just inspirational to me, in my young years, watching the movie of him in the Bahamas with his family, and the coral reefs in the Bahamas. And it really had an impact on me.

David Todd [00:09:58] Isn't that great? And it sounds like it was very intimate. I mean, you got this fellow, his family, his 16-millimeter sort of "what I did this past summer" movies. Is that a fair way to describe it?

Jesse Cancelmo [00:10:12] Yes, yes, but it was all. It was like "my family and our adventures", because his wife and children just had an adventurous upbringing, and life experiences with what he did in his long trips to the Bahamas and other places.

David Todd [00:10:34] Well, so we're talking about, I guess the late '60s, early '70s. I understood that about this same time, maybe in '69, if I'm not mistaken, you made your first SCUBA dive. Is that right?

Jesse Cancelmo [00:10:48] That is correct. That is correct, David. While I was still a surfer and really involved in surfing in Cape May, New Jersey, my parents bought a small cottage in Bermuda. And when I went there, I was just totally blown away by the turquoise waters and the coral reefs, and you could stand up on a cliff and look down and see parrotfish swimming around the reefs. It was just incredible.

Jesse Cancelmo [00:11:18] But here's the thing: the reefs in Bermuda totally surround the island and block the waves, so there's no surf. So, here I was, 18 years old. I'm going, "Well, there's no surf here." It's like a heaven of a place, but there's no surf.

Jesse Cancelmo [00:11:38] So, I started looking around for something else to do on my surfboard. I think the first time we went to Bermuda, I brought a surfboard. It was like, "Well, there's no waves." So, I looked around and I saw this resort SCUBA diving course offered, and I went on it. I went on a resort course SCUBA course. And when I went down and SCUBA dived on the first coral reef experience in Bermuda, it was a life-changing experience.

Jesse Cancelmo [00:12:10] And to view the dazzling, colored reefs and all of the tropical fish swimming around. I realize that, you know, this, how can I explain this to people? What I'm seeing, I don't see how I could adequately explain. This was something that was just so incredible and so amazing to me, I realized that what I needed to do was take some pictures.

Jesse Cancelmo [00:12:42] But I didn't have an underwater camera. I had never even owned a camera in my life. So, I was able to buy a ... actually, I didn't buy it. My father, for my birthday, gave me a Nikonos II camera, and it had a bulb flash. That's how old it was. And this is 1970.

Jesse Cancelmo [00:13:05] So, here I was in 1970 just completely hooked on SCUBA diving and underwater photography. So, the next step was in 1972, I was so driven by the captures that I had, I needed, I felt I really needed to hone my skills as a photographer. And so, I applied for, and was able to get a space at a school called the Brooks Institute of Photography in Santa Barbara, California. They had a three-month long program on underwater photography.

Jesse Cancelmo [00:13:45] And so, I went back to the States. I drove out to Santa Barbara, California in my van, took the course, and it was an incredibly valuable experience for improving my photography.

David Todd [00:14:05] Well, it sounds like you're juggling a lot of skills here, between the photography and the diving. And I thought maybe just as a place to start, maybe we can talk a little bit about this diving technology, which, I imagine has evolved a good deal from, you know, some of these earlier days, more than 50 years ago now, you know, with, I guess, the introduction of Trimix, if I'm not mistaken, and, you know, being pretty celebrated in the culture and like you were talking about the Sea Hunt and the Cousteau programs. And then I guess more recently, I think, some of these challenges of doing these cave dives which sound petrifying to me. Can you talk a little bit about some of the changes that you've seen in the SCUBA world over the years?

Jesse Cancelmo [00:15:01] Well, sure I can. I'll start off, though, with just telling you about my experiences and my evolution as a diver, from being newly certified to where I am today. But, and I want to address, well, let me actually start off with the technical diving because, in the late 1990s, I had many, many shipwreck dives under my belt from diving not only in Bermuda and the historic shipwrecks there, but also lot of shipwreck diving off south New

Jersey, the coast of New Jersey, south and central New Jersey. There's a lot of World War Two shipwrecks there.

Jesse Cancelmo [00:15:49] But I had a lot of wreck diving, and I really enjoy wreck diving. They're artificial reefs and the history is such a fascinating aspect.

Jesse Cancelmo [00:15:59] But I was invited to join (this is, again, 1998 timeframe), I was invited to join a group of technical divers to dive the historic shipwreck, the USS Monitor that's off the coast in North Carolina. But the Monitor is way beyond recreational diving depths. It's down, at the 200-foot level. And so, it requires, having a Trimix certification. In the Trimix, instead of having two gases in your tank, nitrogen and oxygen, you have three gases - nitrogen, oxygen, and helium. And, the helium, having that helium mix, allows you to make adjustments in the entire mix of the tank to be able to dive deeper, safer. So, it's a way that you can dive beyond recreational depths, but very safely.

Jesse Cancelmo [00:16:56] So, I decided, "Well, I want to go on this. This sounds like a fascinating dive." So, I went to Florida and got Trimix certified. And it took me two tries in North Carolina. The first time I went over, the trip was canceled because of strong winds. A hurricane had brushed by. Then I flew back to Houston, flew back then two weeks later, flew back to North Carolina, near Cape Hatteras.

Jesse Cancelmo [00:17:24] And we made it out to the wreck. We anchored into the wreck. Everything looked fine, the conditions looked great. But when I got down to about 180 feet, the clear water that we had, that was probably 60-foot visibility, it was just blackness. There was this muck layer in the bottom.

Jesse Cancelmo [00:17:44] So, I kept going down the anchor line, and I went into zero visibility, and I got all the way down to the anchor chain. And then I went, and now I'm at 200 feet, and I've got my Nikonos camera with me to take pictures, but I can't even see. I couldn't even see the dial on my gauges or my watch.

Jesse Cancelmo [00:18:03] And, so I went down to the end of the chain and to the anchor. And then I touched the wreck, the USS Monitor. But I couldn't even see it. So, then I went back.

Jesse Cancelmo [00:18:16] So, unfortunately, it wasn't a dive for any successful photography. But I did make the dive, touched the USS Monitor and then went up and did my decompression.

Jesse Cancelmo [00:18:30] So, I used my abilities, though, as a open-circuit, Trimix diver to make a number of other dives at the 200-foot deep range. Including in 2001, one of my things I'm very proud of is I dived the Andrea Doria, which is looked upon as a pretty tough dive. It's north of Montauk, New York on Long Island and just below Rhode Island. And that was quite an experience - dry suit diving.

Jesse Cancelmo [00:19:10] And, then another one that I'm very proud of - technical diving. In 2001, I dived the brine seep into Flower Garden Banks National Marine Sanctuary, by the East Flower Garden Bank. And, that's a very interesting dive. It's a super saline lake that's only about 12 to 18 inches deep, but it's down at a depth of 200, about 210, 220 feet deep.

Jesse Cancelmo [00:19:39] And then, I'll also mention that the last Trimix dive I made was actually seven years ago on the McGrail Bank in 2017. And McGrail Bank is one of the newer

additions to the Flower Garden Banks. Sanctuary expansion. It's about 20 miles away from the East Flower Garden Bank. And, it's actually, it's a true coral reef. Unlike many of the banks are not really true coral reefs. They're banks and they don't have a limestone substrate. But McGrail does.

Jesse Cancelmo [00:20:18] The thing about McGrail is it's 140 feet deep, and that is just beyond recreational diver limits. So that required a technical diving certification.

Jesse Cancelmo [00:20:33] So, anyway, I'll just mention also on the cave diving. I'll tell you one, well, I'll tell you a little bit about the cave diving: I'll extend what you were asking me to get into the cave diving. I was never really much of a, I had no interest in cave diving, zero interest in cave diving, until 2011.

Jesse Cancelmo [00:20:57] And what happened in 2011 is friends of mine who were cave divers were working on a project in Texas, near Del Rio in Lake Amistad. And it's called Goodenough Springs. Goodenough Springs is a, it's a underwater cave that starts at about 140 feet deep in Lake Amistad. And it goes in and down to well over 500 feet deep. We know that.

Jesse Cancelmo [00:21:39] So, friends of mine had been doing research there. And at this period of time, 2011, I thought, these guys need to get some light shined on what they're doing with all this research and discoveries that they've done in this cave.

Jesse Cancelmo [00:22:03] So, I talked to Texas Parks and Wildlife magazine about doing an article to kind of showcase, Goodenough Springs and what they're doing.

Jesse Cancelmo [00:22:15] And, they did. They agreed to it. And I, even though I was at that time doing journalism, I felt that it wasn't right for me to write the article. I wanted to do the photography. But I just felt that there should be somebody else writing, because this may look like a conflict where I'm just bragging about my friends.

Jesse Cancelmo [00:22:42] And so, a person by the name of Rae Nadler-Olenik, who was a professor at UT at that time, she was a photojournalist. She was a journalist as a sideline. And she agreed to write the article and we formed a great team.

Jesse Cancelmo [00:23:02] Well, okay, so now here I was, I was going to do the photography to support this article on the research they're doing in this underwater cave. But I wasn't cave-certified.

Jesse Cancelmo [00:23:13] So, we had plenty of time to get our project together. And I made two trips to Florida to get full cave-certified. And so, we did it, and I did it as far as the photography. And it came out in an article in 2011 in Texas Parks and Wildlife called "Deep, Dark and Dangerous".

Jesse Cancelmo [00:23:41] And, it was just a, I think, an incredible project to be involved in and to kind of push it.

Jesse Cancelmo [00:23:53] And, from then, then I realized at that time why, what actually causes people, or what the deal is with cave diving. What exactly is it? Why go into a cave? You know, there's not any marine life in there. So, what is it all about?

Jesse Cancelmo [00:24:12] What it is all about is going places that few, if any, people have ever been to. That's really the main driver is these cave explorers.

Jesse Cancelmo [00:24:25] And when I did the cave diving, I realized that that is real. That is a feeling that you get.

Jesse Cancelmo [00:24:36] But the other thing I realized was that a cave-diving certification is the premier certification, and I recommend it to people, even if they don't want to become a cave diver and have no interest in going in a cave. You will be the most well-equipped scuba diver there is by taking a cave diving course.

Jesse Cancelmo [00:24:58] So, the Goodenough experience was fantastic. It really stands out in my memory, and it really, when I tell people about challenging dives, I would say that the diving in Goodenough springs that I made, and I only went down to about 175 feet, but it was more challenging than diving the Andrea Doria, for me.

David Todd [00:25:29] Yeah. I can imagine it'd be difficult.

David Todd [00:25:33] So one last freshwater diving site that I was hoping you could tell us about: and that's Jacob's Well in the Texas Hill Country near Wimberley. I understand that you've dived there as well.

Jesse Cancelmo [00:25:45] Yes, yes. Jacob's Well. That's definitely a highlight of my Texas diving. Now, my dive there was not a technical dive. We were at depths of, I think about 60 or 70 feet, and I didn't go all that far in. But when you go into Jacob's Well and you enter it, you know, you enter it vertically and then, you go down in a cave about maybe 100 feet, and there's a restriction.

Jesse Cancelmo [00:26:19] And first, let me let me back up a little bit. This is not a cave for any SCUBA diver who is not cave-certified to even think about going in. There's been a number of deaths: people just not trained, not skilled. They don't have the proper training to dive in a cave. And you never, ever want to go into an overhead environment where you can't see the way out if you don't have cave-diving credentials.

Jesse Cancelmo [00:26:53] But for me, I was diving with people who were much more experienced cave divers than I was. And I told them that I wanted to make the dive, and I wanted to go past the restriction, and I wanted to get some photographs in the cave. And they, what they did to get by the restriction is they used a side-mount unit, but I didn't have one. Mine, my equipment was back-mounted and I couldn't squeeze through. So, these two dive buddies of mine, they went down and literally took buckets and dragged a whole bunch of the sand at the restriction away so I could fit through.

Jesse Cancelmo [00:27:33] So, I was able to fit through the restriction with my tanks on my back. And I swam down another, several hundred feet. It wasn't, some cave divers use scooters to go back thousands of feet, but I swam for another 10 or 15 minutes, and then got as far as I needed to get, and turned around and came back, and took a number of photos. I have, one of my favorite shots is of a cave diver at the opening of Jacob's Well, that's on the front cover of Dive Training magazine, and we had a lot of fun taking that picture.

David Todd [00:28:16] Well, these are adventures. And I love the idea, I guess what you mentioned about the Goodenough Spring, and I guess a lot of these cave dives is that it's true

exploration, you know, a new frontier. So, I was wondering if, while we're talking about diving, if you have any comments about just the role of recreational diving as a form of ecotourism, as a way to both explore a natural place, but also protect it. So, I guess there's sort of a tension there. You know, there's, there's use of it, but there's maybe also the opportunity for protecting some of these special spots.

Jesse Cancelmo [00:28:57] Oh, absolutely. No, the protection that is, that is so important. And okay, so going to to what you're describing, let's go back to the Flower Garden Banks National Marine Sanctuary. And because that's the area that is protected now and will continue to be protected, and I really hope that even more will be protected out there.

Jesse Cancelmo [00:29:21] But as far as the relationships and cooperation between the recreational diving people and the Flower Garden Banks National Marine Sanctuary themselves, what I would say is that what is really key is that the dive boat, the M/V Fling, which is a 100-foot long, recreational diving vessel that operates out of Freeport, Texas, to take divers on 2 or 3-day trips, sometimes more, to the Flower Garden Banks. That dive boat operates their operation. The folks are very much in coordination with the Flower Garden Banks National Marine Sanctuary.

Jesse Cancelmo [00:30:18] As a matter of fact, the owner, the current owner, the new owner of the M/V Fling, is now on the Advisory Council at the Flower Garden Banks National Marine Sanctuary. They also use the name Caribbean Charters if you go online. But it's an important factor, the relationship and the communication between the dive operation and the sanctuary is key for protection because the dive operator is out there many more times a year than the sanctuary vessel. They have a research vessel, the Manta, the R/V Manta, and they go out, they make several, they may make a half a dozen to a dozen trips a year, out there.

Jesse Cancelmo [00:31:05] But the Fling, they're out there 40-plus times a year taking SCUBA trips out there. So, they act as a sentry of sorts for the sanctuary. They can readily communicate issues with problems with the mooring buoys. They can alert the sanctuary if they see any vessels out there that shouldn't be out there because there's a 100-foot size limit. And if your vessel is over 100 feet, you're not even allowed in the sanctuary, and certainly not tied up to a mooring because they're not designed for vessels over 100 feet.

Jesse Cancelmo [00:31:45] So, if there's anything illegal going on out there or anything out of place, the dive operation, the dive charter, the M/V Fling, Caribbean divers, they will talk to the sanctuary. They'll alert them of any problems. And they'll also alert them if their divers come up and say, "Wow, I saw something down there, some bleaching on the coral, and it looked pretty bad." They can come back and communicate that to the sanctuary, and the sanctuary can get their folks out there to the mooring buoy that the diver was talking about. And these are the kinds of things that happen all the time through the year.

David Todd [00:32:28] Okay. It's interesting to hear about that kind of collaboration between, you know, the regulators and biologists at NOAA, and these sport divers.

David Todd [00:32:40] So, we talked a little bit about diving. The other thing that you've become really proficient at is this underwater photography. And I think you explained how your dad got you a start with a piece of equipment. And I was wondering how, you moved ahead with gear and strategies. You know, you took this class out in Santa Barbara. Tell us, you know, when you're setting up a shot, how do you arrange the lighting? How do you deal with currents? You know, what's the arrangement for stills versus videos? It'd be great to get

a little introduction into how you think through how you represent this world down there on, you know, still or moving photography.

Jesse Cancelmo [00:33:30] Well, I'm pretty much strictly, I am strictly a still photographer. I hesitated there a little bit, because I do, I have a drone and I do some drone videos, and occasionally, I'll do a video of something, but, I'm almost 99% a still photographer.

Jesse Cancelmo [00:33:53] But, well, here, I'll tell you an interesting story. When I was at Brooks Institute of Photography, we had about ten students in the class, and five of them were divers who wanted to be underwater photographers, and the other five were photographers wanting to learn how to dive and then become underwater photographers. And of course, learn about how different photography is in underwater compared to on land. But they had a skill set of land photography and then learning diving and then underwater photography.

Jesse Cancelmo [00:34:39] And of those two groups, interesting enough, the divers learning photography, who had a lot of experience in diving going into it, and then they had to learn photography, they ended up producing better results than the people that were photographers, and they were learning to be divers.

Jesse Cancelmo [00:35:10] And the reason ... you go, "Well, how could that be?" Well, the first thing that I tell people about doing underwater photography is you have to have good diving skills. You have to hone your diving. You don't want to ... everything needs to be automatic about your diving. You need to be completely comfortable. And if that's not the case, leave the camera home until you hone your diving skills. Once you're comfortable as a diver, you don't have to think twice about your buoyancy and where you're going, then take a simple camera down and then go to something a little more complex.

Jesse Cancelmo [00:35:49] But, you know, I'll tell you a little bit about my own story on, my evolution into becoming an underwater photographer, you know, published in magazines and, and then ultimately writing my books. But, in around 1976, I was really a budding underwater photographer, and I wanted to get published. And I had this, you know, fascinating story to tell about a trip I made to Mexico to Isla Mujeres, to Isla Mujeres, Mexico - the so-called sleeping sharks of Isla Mujeres.

Jesse Cancelmo [00:36:40] And I was able to get some really cool shots and able to get it published. And, then so that kind of set me up for moving forward. And, I then had the confidence that I could get my work published.

Jesse Cancelmo [00:36:58] I then did some work for a publication called Underwater USA, which was a newspaper format, and many, many articles and photos on the Flower Garden Banks. And what I realized, though, was that for me, a newbie, just cutting my teeth in publishing and getting images published, and also my journalism, which I was, you know, kind of working on to also hone it, that what I needed to do is focus on areas that that were unique and local diving and not all of the real experienced underwater photographers, the pros, you know, they would cover stuff like the Cayman Islands and the Bahamas and all of these places that, you know, I could not compete with that. So, I would stick with local diving.

Jesse Cancelmo [00:37:56] And I ended up doing a lot of work for like Scuba Diving magazine and a number of ones you listed at the beginning of this recording. But then I became a contributor on the masthead of Dive Training magazine, and that lasted about 20 years.

Jesse Cancelmo [00:38:17] But the actual, you know, to to start talking about, well, how do I do it in terms of my lighting and apertures and shutter speeds and ISO settings and all of that stuff, I would be here talking for another two hours if I tried to get into that, David.

David Todd [00:38:37] Okay. Fair enough. That may be a thicket, to get down into the weeds there. Well, I guess, fair to say that it's a technical field. And like you said, you just have to be comfortable with your diving to even consider all those other settings and so on.

David Todd [00:38:58] So, one of the things I thought was really intriguing is that I understood that you, at one point, had been promoting the idea of a webcam, some kind of a remotely-operated or automatic camera of some kind at the Flower Gardens. And I wasn't sure what became of that idea, if it came to fruition or not.

Jesse Cancelmo [00:39:21] Well, I'll tell you what the concept was, and I still think it's a great idea. And unfortunately, it's in a holding pattern right now. But what the concept that I had, and this was while I was on the Advisory Council, was to mount a webcam underwater that's capable of live-streaming via the internet to a location on the live reef...

Jesse Cancelmo [00:39:54] Or, if not on the live reef, on the partially submerged platform, an oil and gas platform that went out of production ten years ago called High Island 389A. And it's inside the boundaries of the East Flower Garden Bank. And it's about a mile from the live reefs. But it's a steel structure that used to have used to support a number of wells, a half a dozen or more wells or gas wells that were below the seafloor.

Jesse Cancelmo [00:40:34] And so, the interesting part about this, let me clarify, is the reefs, the live coral reefs, are under the jurisdiction of the federal government. This platform is not under the full jurisdiction of the federal government. The jurisdiction was moved to the state of Texas. And it's really ... there is cooperation between the state of Texas and the federal government on this. But for anybody to ask permission to do this or that on this platform, the agreement to do what you want to do is to the State of Texas Parks and Wildlife, their Rigs to Reef program, not the federal government. So, and the reason I mentioned this is I was feeling like my concept was getting stuck in some bureaucracy and not being able to get approval.

Jesse Cancelmo [00:41:43] But, let me tell you a little bit more about this webcam, because it wasn't just a webcam to see marine life swimming by - tropical fish, a shark, a turtle. But you know, this live webcam, during daylight hours, you'd be able to go on a link on the website, anybody, for free, and see live what is swimming by this camera 100 miles offshore and see the marine life and just be amazed by what you see.

Jesse Cancelmo [00:42:20] And I think my idea was that this would be something that could really give the sanctuary much greater exposure, because it's kind of under the radar for a large segment of our population. Even people who live in Houston, or Galveston, don't even know that we have coral reefs out 100 miles off the shore. They don't know about the National Marine Sanctuary. And this would be a way to give a lot greater awareness of what's out there.

Jesse Cancelmo [00:42:56] But in addition to that, it could be used for data collection, for monitoring and environmental type data collection out there, that could be trended, and you could get real time environmental data from this same device.

Jesse Cancelmo [00:43:14] Well, we were able to come up with a design for it and it involved this underwater camera. And it was going to be, at first it was going to be anchored to the reef.

But then I moved it over to the platform because I got immediate approval from, Dale Shively, who at the time was the (and it was verbal approval, I don't have a, you know, document from the state of Texas), but he was totally on board with this idea on the platform.

Jesse Cancelmo [00:43:44] And, then what we would have is a large, expensive buoy on the surface that would have solar panels on it to provide the power for the camera. And then there would be a big antenna on it that would transmit the signal. And this is a lot of information when you start getting into video, you know, a lot of bandwidth. And, then we struggled for a while, but found a way to get that signal back to shore. That was really the hardest thing to do from a technical standpoint. And we had T-Mobile - they assured us that they could make it happen. So, the technology aspects were pretty well in good shape.

Jesse Cancelmo [00:44:42] And then it came time for, well, who's going to fund this? How are we going to get funding? And, and it just, unfortunately, David, it just went around and around and around and we weren't able to get it done. I wasn't able to get it done before I term-limited out of the Advisory Council. But, it's still a concept that I feel should be done at some point. And as our technology improves and evolves, there'll probably be easier ways to do this.

Jesse Cancelmo [00:45:17] But I think that if you enabled anybody on social media, or had a way to get to the internet, "Hey, here's a fish swimming right now, at the Flower Garden Banks National Marine Sanctuary, and it's a sandbar shark, or it's a silky shark, or it's a whale shark." It would be a tremendous plus for exposure of the National Marine Sanctuary.

David Todd [00:45:47] Yeah, I can imagine it. It seems like it would give a lot of accessibility and kind of transparency to what's going on out there for those of us, most of us, who probably will never visit in person.

David Todd [00:46:01] Well, so while we're talking about the Flower Gardens, maybe you can sort of take us on a little virtual trip and introduce us, I guess, to why the Flower Gardens exist. What's the sort of geological history to that? How would you give us an origin story for the Flower Gardens?

Jesse Cancelmo [00:46:27] Well. The Flower Gardens Okay, you mean as far as how it was discovered? Or the origins of the Flower Garden Banks and how it was discovered?

David Todd [00:46:39] Well, I was thinking even before that, I mean, I understand that it's sort of a interesting geological feature sitting on top of a salt dome.

Jesse Cancelmo [00:46:47] Yeah, absolutely, absolutely. Okay, well, the Flower Garden Banks: you have the East and the West Flower Garden Banks and Stetson Bank. And these banks sit on top of salt domes which protrude from the bottom. I mean, we're going back now eons. And, what happened at the East and West Flower Garden Banks? The surrounding waters are 400 feet deep. And these salt domes, is what they are, they were pushed up from the bottom, you know, thousands of years ago from 400 feet up to a depth of about 60 to 70 feet for the East and West Flower Garden Banks.

Jesse Cancelmo [00:47:37] And so with the distance from shore, the water there is very clear. I mean, it's, 60 to 100-foot visibility and sometimes, 150-foot visibility. It's very, very clear water.

Jesse Cancelmo [00:47:56] So, now you have this mound of, this reef top that's 60 to 70 feet and it's clear water. And it's, the visibility, you know, you have the clear, so you have the sunlight, you have the sunlight. And, it's just perfect for coral to grow, because coral needs the light, and they need the clear, warm oceanic water.

Jesse Cancelmo [00:48:29] And so coral planulae drifted in in the currents from other locations and settled on these tops of these salt domes. And then over years and years and years, we end up with wonderful coral reefs out there.

Jesse Cancelmo [00:48:51] The seeding of the reefs continues to be a work in progress, but most people feel that the planulae drifted via the loop current in the Gulf of Mexico, which is a circular current coming in from the Caribbean. It loops around and then comes out, loops in from the south and loops out to the north and then goes up to Florida.

Jesse Cancelmo [00:49:19] But again, where the seeding source was, it could be as far away as Belize, that actually seeded it. There's a lot of scientific work going on right now with DNA and you know, it's kind of a work in progress.

Jesse Cancelmo [00:49:40] The closest coral reef geographically in the Gulf of Mexico is a reef near, Alacranes Reef, called Cayo Nuevo. But geographically close doesn't necessarily mean the currents are going to go from that point to the Flower Gardens, but that, in terms of just cruising miles on a boat is the closest point.

Jesse Cancelmo [00:50:04] And, so then we, you know, we end up with these wonderful coral reefs that we have today.

David Todd [00:50:14] Well. And so, these coral reefs existed, I guess, as you say, for eons. How were they described and discovered by some of the first humans who might have been a witness to them?

Jesse Cancelmo [00:50:31] Well, the discovery of the Flower Garden Banks is really attributed to the snapper fishermen back in the late 1800s and early 1900s that would go out there and fish. And they would drop their lines in the water, or drop an anchor to anchor out there because it's 60 feet deep and they don't necessarily want to be drifting around, and then when they pull up their anchor, they would describe the colorful marine life that was coming up and they said, 'Oh, this place, this is like a flower garden here", with different sponges.

Jesse Cancelmo [00:51:15] And, you know, unfortunately, they're doing some damage to the reef. But, you know, this was back way before there was any concern about that. You know, the ocean was so big that you couldn't hurt it.

Jesse Cancelmo [00:51:29] But, so the name Flower Garden Banks is attributed to these early snapper fishermen, back in the early 1900s.

Jesse Cancelmo [00:51:40] And then as far as ... did you want me to go into the evolution of, the time frame of recreational SCUBA diving today?

David Todd [00:51:50] Yeah, absolutely. I mean, I understood that there were some interesting visits by the sports divers and Houston Museum of Natural Science, if I'm not mistaken.

Jesse Cancelmo [00:51:59] Yes. So, what happened is, there was a scientific survey that was done, and it's considered the very first, in 1936. It was a hydrographic survey. And so, they were really just trying to get the depth profile and location just designated and get all the specifics on it.

Jesse Cancelmo [00:52:26] And then there in the 1950s, there were more surveys done. And one of the interesting surveys that was done, but was by an oceanographer by the name of Stetson, and he determined that what was on top of these salt domes were actually live coral reefs. And that was Henry Stetson. And Stetson Bank is named after him.

Jesse Cancelmo [00:52:53] But, then, yes, there was further work that was done. The first SCUBA diving expedition was made in 1960, and it was led by Dr. Thomas Pulley, who at the time was the director at the Houston Museum of Natural Science. And, you know, that was really a key milestone.

Jesse Cancelmo [00:53:21] Prior to my move to Houston, I moved to Houston in 1976, and there was a, I had heard that there was a recreational dive boat operating out of Galveston. But the year before I got there, it went out of operations. And I thought, "Oh, jeez." But, I was able to get out there in another boat a year later, in 1977.

Jesse Cancelmo [00:53:45] But at the Flower Gardens itself, in the 1980s, Gary Rinn, who I think you have talked to already, he, he was a really a pioneer for recreational diving there. And he outfitted a oil and gas crew boat that he bought over in Louisiana. And he went to a Louisiana boat building yard, and he had them completely renovate it to be a SCUBA diving vessel, a live-aboard SCUBA diving vessel. And really, Gary pioneered live-aboard diving at the Flower Garden Banks. And, so this vessel, the M/V Fling, is the sole vessel that's out there today.

Jesse Cancelmo [00:54:29] There have been other vessels over the course of time, but the Fling is the one vessel that has sustained itself from back in the late '80s to, today. And it's 100-foot long and it takes about 28 to 30 divers.

David Todd [00:54:50] So, tell us about this first trip that that you made, your first dive, at the Flower Gardens, in '77. I guess that's right.

Jesse Cancelmo [00:54:59] '77! Yeah. Oh, I love talking about that. Yeah, when I moved to Houston (and it was a job transfer), I had never, in my wildest dreams, thought about moving to Texas. And here I was in Houston, Texas, and I was a SCUBA diver, and I had been diving the wrecks off of New Jersey. And so I thought, "Well, what is there to dive here?" And they said, "Well, you can go out and dive on an oil rig." And I said, "Is that it?"

Jesse Cancelmo [00:55:32] And then I went into this dive store and I saw this advertisement for a dive trip to the Flower Garden Banks. And I thought, "Well, that looks very interesting. I think I'd like to do that."

Jesse Cancelmo [00:55:47] But then I found out that the boat wasn't in Galveston or Freeport. The boat was over in Sabine Pass, Texas, near the Louisiana border. But that was okay. That's not terribly far away. It's, you know, 90 miles, 100 miles. And, so I signed up for it.

Jesse Cancelmo [00:56:06] And it was a boat called the Silver King II. And it was a slow-moving lunker, hunker of a boat, or I don't know, if I'm using the right word. But it ran about

six to seven knots. And the captain and owner of the boat, his name was Captain Blood. So, he was the only show in town for getting to the our Flower Garden Banks at that time.

Jesse Cancelmo [00:56:35] I signed up for a trip. I went on it. I had my Nikon camera, film camera, an underwater housing and a strobe. And it was a wonderful trip.

Jesse Cancelmo [00:56:47] We only went to the East Flower Garden Banks, but I was able to capture many images of the fish and the coral on that trip, images I still have today. And, people ask me all the time, "Well, gosh, that's a long time ago. How did the reef look then compared to now?" And my answer is, "The reef today looks to me as beautiful as it was 46, 47 years ago as it was then."

David Todd [00:57:18] That's very heartening. That's great.

David Todd [00:57:21] Now, you mentioned Captain Blood (great name) as one of the folks who was providing a diving platform for the Flower Gardens. But then also, I think you mentioned Gary Rinn, who, as you said, is a real pioneer in live-aboard dive boats. And I understand that not only did you dive with him, but you became a dive master. Tell us about that experience.

Jesse Cancelmo [00:57:50] Wonderful experience. I was much younger then, and I was a hands-on guy on boats. I love boats. But Gary had asked me if I wanted to be a dive master, and I said, "Yes", because that would allow me to go on these trips. And in between the divers that I would prepare for making their dive, when they did their surface intervals, then the dive masters get to do their diving. And during the surface intervals, there's just a few people down there. And to do photography, you don't have to worry about a lot of bubbles, that you're photographing people's bubbles and too many people in the picture that you're trying to take you. So, for photography, it's a whole lot better, if there's just a few people in the water compared to 28 people in the water.

Jesse Cancelmo [00:58:42] So, I immediately jumped on that. And, what Gary did for the training, he actually had a program for, to get NAUI certification dive master, to take a NAUI course to be dive master certified. And I did that with a group of other friends of mine.

Jesse Cancelmo [00:59:04] And you know, what we did, is we set the lines - the sidelines and the trail line in the stern, and, of course, initially hooked up to the mooring with a line. And so, we had all the lines. And there would be buoys to set in place too - trailing buoys and side buoys. We'd do all the dive briefings. We'd make sure that all the records were in order, and verifications of the divers' qualifications were done.

Jesse Cancelmo [00:59:37] And then we also had to ensure that we had headcounts. That's pretty important - divers in, divers out. Do we have everybody accounted for? And make sure that people, after their dives, there were no problems. Everybody was okay.

Jesse Cancelmo [00:59:52] We had responsibilities for filling the tanks and also to make sure if anybody had any problems with their regulators, O-ring on a tank leaking, or something like that.

Jesse Cancelmo [01:00:04] And, then there was an inflatable boat that's on the Fling. And if there were divers drifting away after the dive and they couldn't make it back to the boat, then you had to get in the inflatable and go get them.

Jesse Cancelmo [01:00:18] And, so there was a lot involved, a lot of responsibilities.

Jesse Cancelmo [01:00:22] But I did that for, gosh, I think about ten years. And, then I got to the point where I was getting older and I thought, "You know what? This isn't as fun as it used to be. I think I'll just start paying and continue going out as a guest."

David Todd [01:00:39] I think you may have touched on this earlier, but it might be nice to get your, maybe a little reprise on this. I understand that you dove down to the brine seep, near the East Flower Garden, and that's a pretty extraordinary experience, from what I understand. Can you tell us what you remember?

Jesse Cancelmo [01:01:00] Oh, absolutely. It was. It's one of my most memorable dives. And actually, I did an article in SCUBA Diving magazine on this trip. And yes, it's a, it was a technical dive, and it was about 200, 220 feet deep. And it wasn't done off the Fling. At that time (this was 2001), there was another dive boat. Actually, there were two other dive boats at the time. Gary ran had a second dive boat. You know, he had the Fling and then he had a second one called the Spree that was a sister ship to the Fling - 100 feet long, 28 to 30 divers. Then there was a 75-foot long live-aboard, that was out there, that was called the Sea Searcher.

Jesse Cancelmo [01:01:55] And I chartered the Sea Searcher for this brine seep dive. And at the time, the sanctuary did not have a specified "no, you cannot drop an anchor anywhere in the sanctuary". They now have that. You cannot today put an anchor anywhere in the sanctuary. You have to use the mooring buoys. And if there's no more mooring buoys, you have to drift. And if you're diving, that's called live boating it, where your boat isn't secure, the boat's drifting and you're diving. And that type of diving is done under certain circumstances with the right people.

Jesse Cancelmo [01:02:37] But we were able to drop an anchor at that time. I got permission from the sanctuary. And, this was a group of diver friends of mine. And, we were able to successfully find the brine seep. I have, I think, one photograph. I was still, this was back when I was still shooting film in 2001. I switched to digital a year or so later.

Jesse Cancelmo [01:03:03] But it was an extraordinary dive just to find it and then go down and see it. It's a super saline lake that's about 12 to 18 inches deep, and it almost looks like white, well not like snow, but like a white icing down on the bottom. And, it has a lot of scientific implications where it's really an area kind of a small niche scientific area of scientific interest - these brine lakes.

Jesse Cancelmo [01:03:46] And there's not just this one at the Flower Gardens. There's a number of them in the Gulf of Mexico.

Jesse Cancelmo [01:03:54] But like I was talking about cave diving and few people have been there, I think that there's probably, on one hand, the number of people that have ever SCUBA dived to the brine seep at the Flower Garden Banks. There have been people who have been there in submersibles, and they've sent cameras down. But, I don't know, other than the trip that I organized in 2001, I don't know of any other, SCUBA trip, technical SCUBA trip, that's been out there since.

David Todd [01:04:34] Okay. Well, just to explore a little bit more some of these experiences you've had at the Flower Gardens, I was wondering if you could talk about night dives, and what some of the special qualities of those might be.

Jesse Cancelmo [01:04:49] Sure. And I'll say now, David, that, today and in my life, in my years of SCUBA diving, I kind of pass on night dives unless there's something very, very special.

Jesse Cancelmo [01:05:03] And there are areas that that are special. But one of the things that about night diving that I have yet to do and I really, really am anxious to do, is what's called blackwater diving. And what blackwater diving is, is when you dive at night in ultra-deep bottoms where the in the evening, in the ocean, in the deep ocean, there's what's called upwelling. And what the upwelling does is if you're in water that's a thousand, two thousand feet deep, at night the animals and the critters that are normally down way below diving depths, they're down, 500 feet and deeper, they come up to the surface. And that's when swordfish, people who fish for swordfish, they do it at night because the swordfish are down at the bottom during the day, and they're up towards the surface at night.

Jesse Cancelmo [01:06:04] Well, also, what comes up to the surface during the night are these incredible planktonic or, you know, you see different animals in their very early stages of development that come up. And I have yet to do that. And that's something that, you know, these unusual organisms that come up in their larval stages, that's on my, my near-term list to do.

Jesse Cancelmo [01:06:31] But at the Flower Garden Banks, I can tell you I've made numerous, numerous dives at night there. And basically, you see things that you don't see during the day. You see lobsters, for example. Now, during the day, I've seen lobsters walking around the reef, during the day. And you go, "Wait a minute, why is a lobster out during the day? They're supposed to only be seen at night." Well, that's usually a sign that the lobsters are molting, when you see them walking around the reef during the day. And that's when they shed their shell, grow a new one.

Jesse Cancelmo [01:07:04] But at night, at the Flower Gardens, there's cool stuff like parrotfish that are sleeping, and then these red night shrimp that are small, maybe two, three inches long, and they're red and they come out at night and their eyes glow from the dive lights. So, when you shine your light on the reef, you see all these little lights, looks like tiny little light bulbs, all over the reef. And then you swim up closer and you look and there's a shrimp there. And I really, I have a lot of photographs of the red night shrimp. They're so cool.

Jesse Cancelmo [01:07:40] And there's other critters that, you know, you see at night and you don't see so much during the day that make a night dive. And I haven't even gotten into the mass coral spawning yet. But, of course, that's the epic night dive that I would do anytime.

David Todd [01:07:59] Well, let's talk about that. This is the coral spawn, is that correct?

Jesse Cancelmo [01:08:05] That's correct.

David Todd [01:08:06] Yeah.

Jesse Cancelmo [01:08:07] The mass coral spawning. And that is really, if someone were to ask me, what is the best dive you ever made at the Flower Garden Banks? And, you know, I

talked about some of these technical dives that are real, yeah, you know, very, very strongly set in my memory. And I'm very proud of them.

Jesse Cancelmo [01:08:30] But for a recreational diving sphere, the mass coral spawning that happens every August is by far the most epic diving experience that the Flower Garden Banks has. And it's totally predictable. Eight to ten nights after the August full moon, and there's a number of species, and you can go on the Flower Garden Banks website and see much more details that I'm going to give you.

Jesse Cancelmo [01:09:02] But there's just several species of coral that spawn and the ones that have, that put on the best show of spawning, it occurs at 9 p.m. at night. So, the dive boat knows exactly when to put the divers in for the greatest highlight of witnessing this experience, where the reef just explodes with coral spawn. And it's like a upside-down snowstorm in the water column and you'd have to see pictures of it to really understand, but it's like snow going upwards, but they're tiny little white and pink balls of eggs, most of them are eggs, with male and female components, and then some are female only that come up to the surface. And it's just, an incredible, incredible experience to witness.

David Todd [01:10:11] Wow. Very dramatic.

David Todd [01:10:15] Now I understand that there's some 300 species of creatures, just of fish, and then others that would be counted, I guess, as well, at the Flower Gardens: sponges, crustaceans, mollusks, echinoderms. What can you tell us about some of these, creatures that you've seen, while you've been on the reef?

Jesse Cancelmo [01:10:42] You mean, as far as, what kind of amazing creatures that I see out there?

David Todd [01:10:47] Yeah, yeah. What are some of the things that that really stick out in your mind as being quite dramatic and remarkable?

Jesse Cancelmo [01:10:54] Oh. Yes. Yes. It's, you know, it's a pretty cool list of marine life. And a lot of people aren't aware of this, but yeah, sometimes we see whale sharks out there - the largest fish in the ocean, a whale shark. You know, these are fish that are 40 feet long, and yet they're totally harmless.

Jesse Cancelmo [01:11:16] There's other sharks out there, too. We'll see sand sharks. We see scalloped hammerhead sharks. We see Caribbean reef sharks. And, even nurse sharks. So, just for the category of sharks, those are amazing sights to see out there.

Jesse Cancelmo [01:11:35] Then there's different types of rays. There's the oceanic manta rays. And I'll get back to that in a minute. But there's also southern stingrays. There's spotted eagle rays. There's rough-tailed rays. And these are all very large, dramatic marine life encounters. And that's what really gets scuba divers excited.

Jesse Cancelmo [01:11:57] But the oceanic manta rays are, they're pretty common in the summer to see them. If you go out there, if you make two or three trips out there, you're bound to see manta rays on at least one of your trips. So, that's pretty cool.

Jesse Cancelmo [01:12:14] And then, you know, when you get down to smaller critters, for me, anyway, I really like the blennies out there at Stetson Bank. They're down in the sand. You

have these little sail fin blennies, and they're only about three or four inches long, but they come out of the bottom and flap their dorsal fins to try to arouse other ones. And that's pretty cool to witness that.

Jesse Cancelmo [01:12:50] And, then there's also one of my favorites on the platforms of small guys is the tessellated blennies, because they're so colorful. They've got an orange, it's orange and it's spotted and it's just a dramatic, it's just a dramatic little fish to see how it's decorated.

David Todd [01:13:17] Well, this gives us a lot of good ideas, a little introduction, a little taste of what you might see out there and maybe an idea of why it's been so meaningful.

Jesse Cancelmo [01:13:32] And I did want to ask you: you've been diving for over 35 years. I think you only missed two years from 1988 to 2023. What is the ongoing appeal of the reef to you, do you think? What draws you back?

Jesse Cancelmo [01:13:51] Oh, what draws me back? And people ask me that a lot, but it's, you know, I've been diving around the world, really, on six of our seven continents around the world. And so much of my diving has been in the Pacific Ocean, too, because the number of species out there is so much greater than, than we have in this hemisphere.

Jesse Cancelmo [01:14:18] But what really draws me back is, number one, it's my home. It's my hometown. My hometown for 45 years has been in Texas, has been Houston, Texas, and the Houston, Texas area, so I'll extend that down to the coast, to Galveston and Freeport. But it's a feeling of, "Hey, this is my hometown reef", and I've got a, I really, have a, there's a spot in my heart for the Flower Garden because it is my home town reef.

Jesse Cancelmo [01:14:51] But what, okay, so what do I like about it so much? It's remoteness. It is so far off of shore. And it's, maybe it's not just me, I know other people feel this way too, but it's so far offshore and you never know what you're going to see out there. And that gives me, that kindles in me, a purpose for going out there year after year after year. Because some people say to me, "Oh, I've been out there before. Why do you keep going out there? Haven't you seen enough?" And I can never see enough out there.

Jesse Cancelmo [01:15:31] And I mentioned the manta rays and the big animals and also the turtles. There's loggerhead turtles that you'll see out there very, very often, both on the reef and, on the platforms. And I've seen frog fish camouflaged on sponges out there. Very few people have ever seen a frog fish out at the Flower Garden Banks. But you just have to look around and look at sponges because they camouflage themselves so well. But this is a fish that very few people that I know who dive the Flower Gardens has ever even seen. And, and if you said, "Oh, I saw rockfish", they would question. "Oh, there's no frogs fish out there. I've never seen one out there." But they're out there.

Jesse Cancelmo [01:16:16] And these kinds of things, really, make me, excited every time I go out to the Flower Garden Banks diving.

David Todd [01:16:30] That's nice. I guess there's always this possibility of a big new surprise.

David Todd [01:16:37] Well. So, I guess this all gives a idea of why you have worked over the years to protect the Flower Garden reefs, and I thought a place to start might be just moving

sort of through this chronologically. As I understand it, in 1990, mooring buoys were installed to try to protect against damage from anchors and chains and cables and so on of ships that might be visiting or passing through. And I was wondering if you could talk about how that came to be. I mean, this is a big effort to put these buoys in, as I understand it.

Jesse Cancelmo [01:17:19] It was, it was. And I am just proud to be able to tell people I was part of all this. In 1990, two years before the Flower Garden Banks became a National Marine Sanctuary, a group of divers from Houston and Florida, they used the M/V Fling, Gary Rinn's M/V/ Fling as a platform to install mooring buoys at the East and West Flower Garden Banks and at Stetson Bank.

Jesse Cancelmo [01:17:50] And this was being done totally independent of any government entity, because it wasn't a national marine sanctuary - wasn't yet. But the diving community in Houston and the region felt so strongly that something had to be done. And I got to take my hat off to Gary Rinn because he put this whole thing together. He was really the leader, the guy that said, "Hey, we need to protect these reefs. I've seen too much damage out there. It breaks my heart when I see that a big ship has come in here and dragged across this reef. You know, that's the reason we need it to be protected. But, for other boats, smaller boats that come out here dropping their anchors, I want to be able to have them, give them the ability to tie up at a mooring buoy, and not drop an anchor.

Jesse Cancelmo [01:18:49] So, so then we needed to get funding for having this done. And again, I'll say Gary Rinn was the mind, the guy that put this together. He planted the seed for an organization called GREAT, the Gulf Reef Environmental Action Team. And it was set up as a non-profit organization. And its overriding mission was to support projects to protect and to learn more about the East and West Flower Garden Banks and Stetson Bank. And because GREAT was able to secure funding for some scientific work that was being done at Stetson Bank. But the funding for this trip out to put in the mooring buoys was funded by this non-profit organization.

Jesse Cancelmo [01:19:44] And Gary brought friends of his from Florida who had the know-how, and the technology. Two of them I'll name because these are guys that I think back with such fondness - Billy Causey and John Halas. They were instrumental in the success of putting the first mooring buoys at the Flower Garden Banks because they had already used them in the Florida Keys.

Jesse Cancelmo [01:20:13] So, these guys knew how to do it and they knew how to get the job done. And they said, "Well, we'll come to Texas and help you guys out." So basically, a number of stainless steel bolts cemented into holes that were drilled into the substrate of the reef, where the coral was dead. You know, we weren't drilling holes into live coral. It was areas where you don't have 100% live coral down there. It's actually 50%, which is pretty amazing. But pick a spot where there's no live coral. And then, you know, it's basically limestone and you drill a hole, two holes, and then you put a U-bolt in and cement it to the bottom. And then you attach a line, shackle it to the U-bolt, and you run it up to the surface and put a buoy on it.

Jesse Cancelmo [01:21:03] And, so, yeah, Gary led this in 1990, and it was very successful.

David Todd [01:21:13] And what was the sort of concern about the damage? I think you mentioned that, you know, small and large boats had probably inflicted some harm to the

reefs or there was just that worry that something traumatic might happen. Well, what do you think was the sort of source of the worry?

Jesse Cancelmo [01:21:33] Well, the risks that we saw back in those years to the sanctuary and really the driving force for wanting it to be designated a protected site, a National Marine Sanctuary, were from, the worst damage at that time was caused by large ships who would be coming into Galveston, and they wanted to stand off for one reason or another, 100 miles from shore. And they needed a place to anchor. And they'd look at their chart and they go, "Oh, look, it's only 70 feet deep. Let's go over and drop our anchor there."

Jesse Cancelmo [01:22:22] And, so they didn't go, it wasn't intentional harm of a reef, but it was a convenient place to drop an anchor. And these large anchors, they'd be dropped. And then they drag across the reef, and it would just scar the reef, tremendous scars on the reef from large anchors dropped by ships.

Jesse Cancelmo [01:22:49] And, Gary Rinn was a person who recognized all this and said, "Hey, we need to get this area protected, and we need, mooring buoys put in."

David Todd [01:23:03] And I guess, these mooring buoys were maybe some of the clearest, sort of tangible, efforts to protect the reef in those early days. But I understand there was also this political, legislative, rule-based effort to try to get National Marine Sanctuary status for the Flower Gardens and Stetson Banks. Can you walk us through how that came about?

Jesse Cancelmo [01:23:27] You mean as far as the ... let me make sure I understand what you're asking.

David Todd [01:23:33] Sure.

Jesse Cancelmo [01:23:34] Is it, the original designation as a National Marine Sanctuary or...

David Todd [01:23:40] Yes sir. Yeah. I think I was thinking we might talk about the 1992 designation of the East and West Flower Gardens and then talk about Stetson, and then the '21 protection of some of those other dozen or so banks.

Jesse Cancelmo [01:23:54] Yeah. Yeah, yeah. Well, it was, it really, I think the driving force for the designation as a National Marine sanctuary was, there was a lot of push and effort by the Houston area, and the greater Houston area dive clubs - recreational divers. It was the recreational divers who really have to be credited for a lot of the lobbying and the pressure for having this designated, this area designated as a national marine sanctuary.

Jesse Cancelmo [01:24:35] And that effort started years before 1992, and it finally came to a success in 1992 when the federal government, when NOAA, the National Marine Sanctuary home office in D.C., they, you know, they were able to get the designation for this area. And, Steve Gittings was the very first sanctuary manager in 1992. And, when you look back from 1992, how did this all happen? I think you really have to give most of the credit to, the support to do this from the scuba diving community who wanted to preserve and protect these really glorious coral reefs that we have offshore.

David Todd [01:25:31] Well, it sounds like they were, I guess, active in some of these, was it like a letter-writing campaign?

Jesse Cancelmo [01:25:39] Yes. Oh, yeah.

David Todd [01:25:40] Or calls to their representatives or attending hearings? What sort of work did they do?

Jesse Cancelmo [01:25:47] A lot of that. Well, there was all sorts of letter-writing going on. And a person who really did a lot of work in that area for the cause was a guy by the name of Dick Zingula. And Dick is unfortunately no longer with us. He's passed. But Dick was a real fighter for the Flower Garden Banks. And he gets a lot of credit for the work he did, in the diving community, alerting people, having people understand what was going on, and have a real desire to help support making the Flower Garden banks a National Marine Sanctuary.

David Todd [01:26:34] Well, that's really helpful.

David Todd [01:26:36] And so, I understand that these northwestern Gulf banks have been sort of protected in stages with East and West Flower Gardens first, and then Stetson Banks, and then some of these associated banks just, what, 3 or 4 years ago? Are you familiar with any of those later phases after the initial 1992 designation?

Jesse Cancelmo [01:27:01] David, I'm familiar with all of them.

David Todd [01:27:03] Oh, good. Good.

Jesse Cancelmo [01:27:03] I'll start out. Yeah, well, let me I'll start out with Stetson Bank.

David Todd [01:27:07] Yes sir. Please. do

Jesse Cancelmo [01:27:07] Because Stetson Bank is really, you know, I hate to say favorites, but I will. I'll be honest. There's a reef. There's a coral formation at Stetson Bank that's my favorite place to dive, my favorite from any other place in the entire sanctuary.

Jesse Cancelmo [01:27:30] But Stetson Bank is kind of a unique third reef in the original sanctuary. And I say the original sanctuary. In 1992, it was, it was just the East and West Flower Garden Banks. And then a few years later, Stetson Bank was designated as the third reef in the sanctuary. And Stetson Bank is not a true coral reef, yet it does have several species of coral there. And as I said earlier, one is this Madracis coral formation that's my favorite in the entire sanctuary.

Jesse Cancelmo [01:28:07] But, the situation with the formation at Stetson, what's different about it than the East and West Flower Garden Banks is it does not have a limestone substrate. It's basically siltstone and claystone substrate. And, when I say limestone, it's really, aragonite, which is a type of limestone, that the East and West Flower Garden Banks have and McGrail Bank. And a lot of people don't know that there is a third true coral reef, that's one of the newly protected reefs.

Jesse Cancelmo [01:28:50] So. But going back to Stetson. Okay. When you go to make a dive at Stetson Bank, you see huge schools of snapper, hovering over these, they have these pillars that stick up, on the north wall, and then there's a drop-off. The formation itself is very different and unique from the Flower Garden Banks.

Jesse Cancelmo [01:29:16] So fortunately, the Stetson Bank, not too many years after the east and west were designated a protected area, Stetson Bank was as well. And Stetson Bank at that time had three mooring buoys that were put in in 1990. And then now, there's five buoys at Stetson Bank. So, that's a great place to go.

Jesse Cancelmo [01:29:43] And, I mean, to me, it was a no-brainer to add Stetson in 1996. And it happened.

David Todd [01:29:51] And then I gather, was it, 25 years later? There's this, you know, another kind of a wave of protection effort. And then these additional banks get included in this sanctuary. How did that come about? And maybe as a sort of an add-on question, why did it take so long?

Jesse Cancelmo [01:30:16] Yeah. Yeah. No, it did take a long time. And, unfortunately, too much. Well, I say too much time. I'm very happy that it happened. Of course, I'm happy that it happened. But, it was a struggle. It really was a struggle because there is a lot of competition out there from the oil and gas industry. There was a lot of push-back.

Jesse Cancelmo [01:30:51] But the 2021 expansion started in 2007. And, it included such banks as Sonnier Bank, Bright Bank and Geyer Bank, which I've dived on all three of those banks. Sonnier and Bright Bank are both barely within recreational dive limits. Well, so anyway, Sonnier, Bright and Geyer, I'm sorry, all three of those are within recreational diving. Sonnier is off of Louisiana, and it's about the same distance offshore as Stetson Bank, and I call it, I refer to it as Stetson and Sonnier Bank as sister banks. One's off of Texas and one's off of Louisiana, because there's a lot of similarities.

Jesse Cancelmo [01:31:38] But Bright and Geyer Bank, are not too far from the East Flower Garden Banks and I've dived on both of them using, the Sea Searcher charter that I mentioned before, using that boat and doing whole-boat charters because the Fling has never been there.

Jesse Cancelmo [01:31:57] But, but I'll say that having dived these banks, I have been very, very supportive of expanding the sanctuary and the latest expansion activities were ongoing when I was on the Advisory Council, and actually, I was part of the team that looked at what did we need to protect? What were we going to be able to get approved? How the boundaries would be? And what we would recommend to the Flower Garden Banks staff, because they had done all of the scientific research to determine not only what additional banks should be protected, the fifteen that are protected now, but also where the boundaries should be based on scientific information that they had developed over years and years.

Jesse Cancelmo [01:33:03] In other words, well, where, what really deserves protection? Where should that line be? And they did exhaustive scientific studies and came to a determination of where it should be, and made that proposal. But that was not going to move forward with the oil and gas industry. They wanted access to areas that were within that designated desired sanctuary. And so, there was a lot of struggle going on. And within the Advisory Council, the leader of this effort who was an oil and gas guy, he, you know, there was the good and the bad. There was the good was that he knew how to handle the oil and gas industry and had a lot of friends and influence and so forth. But, at the same time, the boundaries were squeezed quite a bit.

Jesse Cancelmo [01:34:14] And, I say that, you know. Overall, I just want to say that that I'm extremely happy that we had 15 new banks added to the sanctuary and, and the total

protected area now is three times of what it was earlier. Earlier, before this latest expansion, we only had 56 square miles protected. Now it's 160 square miles, nearly three times.

Jesse Cancelmo [01:34:45] So how can I not be happy about that? But what I'm disappointed, I am disappointed. I'm disappointed because what we wanted was about 380 square miles, and that was based on scientific studies - seven times greater. Now it was still the same 15 banks, but it was just the protected area for activities that could not take place in this sanctuary area, it got squeezed and, you know, if somebody asked me, "Hey, am I happy with that they got squeezed." I'd say "No". I wanted the larger sanctuary.

Jesse Cancelmo [01:35:28] But, that's what we have now.

Jesse Cancelmo [01:35:32] And you know what? That doesn't mean we can't further expand those boundaries in the future. And as you know, as we're progressing in this new world now with different forms of energy and, you know, all different types of new alternatives, alternatives that we have now for energy, that we could very well expand the sanctuary from what it is now, today, based on the latest, to a larger sanctuary. And I just hope that happens.

David Todd [01:36:06] Thank you.

David Todd [01:36:08] So, we talked about the efforts by NOAA to set up these national marine sanctuary zones, and I was interested that, that there's an international group, the International Maritime Organization, that recognized this Flower Garden National Marine Sanctuary as one of the world's first no-anchor zones. And I'm curious, you know, if you can tell us much about that and what it means, not just for Flower Gardens, but for reefs, maybe around the world.

Jesse Cancelmo [01:36:44] Yeah. You know, it's pretty interesting because when I first read that, I knew, of course, that it was no-anchor as a previous boat owner. Just last year, I sold a boat that I had for, ten, 11 years, and when I had it here in Galveston, it was a 42-foot Grand Banks trawler set up for cruising and for SCUBA diving. I had a compressor on it, and I made numerous trips myself on my boat to the Flower Garden Banks. And I know in my knowledge of boating, my knowledge of navigation, when I had my chart plotter on and, you know, anybody worth their salt with a boat now that's going out in the ocean, they have a chart plotter. And it's electronic. You don't use paper charts anymore. Everything's electronic.

Jesse Cancelmo [01:37:39] So you turn your chart plotter on and you go, "Where am I going? And where do I need to go?" And then you, you go out and point out to the Flower Garden Banks. You will clearly see on the chart plotter "this is a National Marine Sanctuary". And did you read the note below? It says, "No anchoring".

Jesse Cancelmo [01:37:56] So, this took place. Gosh, I'm not sure what year it was. It took place, but yeah, you mentioned the International Maritime Organization. This was done to ensure the designation as a no-anchor on chart plotters on all vessels, large and small. And as you already said, it's the world's first no-anchor zone.

Jesse Cancelmo [01:38:21] And if you designate a place as a no-anchor zone and you don't have it on the chart plotters, it's not going to do you very much good, because that's what the operators of the boat go by. And that was done. So, all the charts, the electronic charts have been updated to clearly show a warning that this area is no-anchor.

David Todd [01:38:45] That's great. It probably helps a lot with people being alerted and aware of what the rules are out there.

David Todd [01:38:53] So, something else that I thought was interesting, in your involvement with the Flower Gardens, is that you served as a Naturalist on Board, and I gathered help debrief and tutor divers about what the Flower Gardens were about. And I was hoping you could sort of help us understand that.

Jesse Cancelmo [01:39:20] Sure. I participated in this Naturalist on Board program for a number of years. And what it was was, this was in the early, early 2000s, and there were two dive boats at that time. There was the M/V Fling, which is again, it's still there, the M/V Fling. But there was a second boat, the Spree (I mentioned it earlier), that was the sister boat for the Fling. And so, both boats were side by side in Freeport, under the same, well, at first under the same owner, Gary Rinn. But then later there were two owners of the boats: each boat had a different owner.

Jesse Cancelmo [01:40:00] But both of the vessels were participants in a program funded by NOAA. And NOAA funded this program, this Naturalist on Board program. And I was asked by the Sanctuary office if I would be willing to be one of the participants on this. And I agreed to. And the purpose of the program was to educate recreational divers on coral reefs, to give them a much better understanding and appreciation of what they're seeing when they go down there. And to become better stewards of the environment now that they can understand and appreciate what's there, and appreciate the fragility, and how easily harm can be done to this environment.

Jesse Cancelmo [01:40:57] I loved the program. I thought it was fantastic. But unfortunately, because of budget cuts, the program only lasted about three to four years.

David Todd [01:41:14] Okay.

David Todd [01:41:15] One of the things that I thought was really intriguing about your role with the National Marine Sanctuary at the Flower Gardens Banks was this position that you held both as a member and then as an officer of the Advisory Council that advised management, I guess, of how the Flower Garden should be protected and used. Can you talk about that role, where I gather you represented the recreational diving community?

Jesse Cancelmo [01:41:48] That is correct. That is correct. The way the Sanctuary Advisory Council is made up, the various members, the purpose is to have, and all the sanctuaries operate this way, is to have representation from all of the user groups and interest groups. And there's commercial fishing, recreational fishing. There's environmental. There's oil and gas. There's recreational diving. And there's ... education is one of them. Research is another one.

Jesse Cancelmo [01:42:28] So each one of these interest groups has members that you apply to be a member and this is all, just volunteer, everybody's a volunteer in this. There's no payments being made. You're volunteering because it's a passion you have. And I was on the Advisory Council for representing recreational [diving] for 11 years. And what I did, I acted as a member, I acted as a conduit between the actual recreational diving community and the sanctuary staff.

Jesse Cancelmo [01:43:15] So I would communicate pertinent news, information that was pertinent to the diving community through the various dive clubs, you know, their newsletters, newsletter contacts I had. And similarly, I would receive feedback from the diving community generally, mainly through the dive clubs, because we have a number of dive clubs in the Houston area, their concerns or any ideas they may have. And so, I was a two-way conduit of communication. That was how I operated.

Jesse Cancelmo [01:43:54] And, sometimes I would suggest a presenter to the sanctuary council and say, hey, we ought to get somebody in here to talk more about the latest on climate change or something like that. But, really, I was the guy that would connect the sanctuary staff to the Houston area, and really Texas area, diving community. And I really am proud of the fact that I was able to do that for that period of time. And, I think a lot of good things came out of it.

David Todd [01:44:34] Well. Let's talk a little bit about the Flower Gardens themselves.

Jesse Cancelmo [01:44:41] Sure.

David Todd [01:44:41] And, I think you mentioned that the Flower Garden seemed to be faring pretty well, but, as somebody who's seen them, you know, since the late '70s, I gather, what have you seen new and different, good or bad, indifferent? How have things trended there?

Jesse Cancelmo [01:45:05] Well, when you look at the coral reefs around the world, and I've seen some terrible, terrible situations ... I went to the Maldives. This is, I mean, this is more than five years ago, and they had a terrible warming, ocean-warming spell out there. And the bleaching was horrible. It really battered the reefs in the Maldives.

Jesse Cancelmo [01:45:33] And at the Flower Garden Banks, as I speak right now, things are still very, very good.

Jesse Cancelmo [01:45:43] And I mentioned earlier how I felt ... now I haven't been out there this year. I plan to go out. I have a trip, I'll be going out in July of this year. I've already set that up. But, I was out last year and swam through the reefs, East and West and Stetson Bank, and things looked pretty good. I mean, I've seen over the years times where there's been algae blooms that have been a problem. But then they've recovered and I've seen bleaching occur and then and, you know, almost a full recovery in most instances.

Jesse Cancelmo [01:46:24] And so, I've seen health issues come up.

Jesse Cancelmo [01:46:27] But, I would say, if you were to ask me, how are things right this minute, I would say they're good.

Jesse Cancelmo [01:46:34] But what I'm hearing more of and more of every time it's brought up, is the warming temperatures in the ocean and the acidity. And, although things may still be okay now, I'm a little nervous about the direction we're headed right now.

David Todd [01:47:04] You know, one thing that I think is interesting, I mean, it seems like there are these worldwide issues facing reefs, but I think it's pretty extraordinary that the Flower Gardens is right in the midst of major sea traffic and oil and gas activity, just a lot of industrial uses. And I'm curious, you know, from your perspective how that sort of

coexistence of this very carefully protected reef, you know, somehow accommodates oil platforms not so far away, and ships steaming into, you know, New Orleans and Houston and so on. What do you think about that?

Jesse Cancelmo [01:47:50] Well, yeah, there's all sorts of risks that are still out there and threats, I should say, that are out there. And, you know, the world's getting bigger. It's not getting smaller: the world population. And, so more and more is needed in more and more places. And, you know, as far as shipping goes, for example, yeah, the shipping ... One of the new reefs that was added for protection in the sanctuary, McGrail Bank, that I mentioned earlier, I've been there. I've dived there. And, you know, it's pretty far away from the East Flower Garden Banks, I believe it's about at least 25 miles away from it. And it's right next to a shipping fairway. I mean that shipping fairway is so close to that reef.

Jesse Cancelmo [01:48:50] But, the good news is now it's protected. And so, you know, a vessel, they can see as they're going in that fairway, hey, there's a fragile protected part of the Flower Gardens called McGrail Bank. And look at where the boundary is. And we're in a lane that's pretty darn close to that reef. We need to make sure we don't... So, so really, you've got a responsible captain on the ship. He's not going to accidentally, you know, bang into that reef.

Jesse Cancelmo [01:49:26] But, you know, as far as the oil and gas industry, well, you go back to the BP oil spill. We dodged a bullet because none of those effects from the oil spill came close enough to the Flower Garden Banks to have any effect whatsoever. There was zero effect at the Flower Garden Banks. Even the newly designated reefs were not, at least it's my understanding, were not affected at all by the BP oil spill.

Jesse Cancelmo [01:50:02] But then you have, you still have operating platforms. And can they be a threat? Of course, if there's some kind of an accident that occurs. It could be, could mean terrible things for a live coral reef.

Jesse Cancelmo [01:50:18] And also one of my concerns is this network below the seafloor, not too far below the seafloor, only a few feet below the seafloor, you've got this tremendous network of pipes, and with hydrocarbons. Now, generally speaking, the western Gulf of Mexico, where we are, is mostly gas, and the eastern is mostly oil. So, we, in my thinking, anyway, we have less of a threat because of that. But still you have this network of piping that ... there's a pipe right now off of Louisiana, they still haven't figured out how to, that's leaking oil, that they still haven't figured out how to stop the leaking oil.

Jesse Cancelmo [01:51:19] But, that is all just part of why we need further protection and why we need all of the sentries we can get out there looking after it. Because you can't, the Coast Guard is not going to be out looking at the coral reef to see if anybody's around. I mean, they've got their work to do. And if they're out there and they see something, of course they're going to do something about it.

Jesse Cancelmo [01:51:50] But, we need new technologies that some of these young, bright minds can come up with to be able to further protect these marine sanctuaries.

David Todd [01:52:11] So, we talked a little bit about the sort of man-associated problems like oil and gas and shipping. I'm curious about some of the creatures that are out there. And two things occurred to me that I really wanted to ask somebody like you who is familiar with the Flower Gardens. And on the one hand, I understand that there was a sea urchin die-off

many years ago, and that those issues with the sea urchins pop up from, you know, now and again. And I was wondering if you've experienced that out at the Flower Gardens.

David Todd [01:52:45] And then the other question I wanted to ask you, and I'll just give you a little heads-up, is about the lionfish that I understand has appeared at the Flower Gardens quite recently and, you know, has its own effects.

David Todd [01:52:57] So, could you talk about those two creatures and how they interact with the reefs?

Jesse Cancelmo [01:53:03] Well, the sea urchin, I have to tell you, Dave, I'm not really, you know that gosh, how many years ago would that have been? It's not recent. I really can't tell you anything about the sea urchins. I don't ... I'm looking at some of the notes I took, and I don't really have any notes on the sea urchins. So really, I'm at a loss right now on that.

David Todd [01:53:42] No that's fine, that's fine. I think it was in the '80s or so. It was a long time ago.

Jesse Cancelmo [01:53:46] Okay.

David Todd [01:53:48] But I gather the lionfish a more recent phenomenon. And, maybe that's something that you can explain for us.

Jesse Cancelmo [01:53:56] Oh, yes. Yeah, absolutely.

David Todd [01:53:59] Please.

Jesse Cancelmo [01:53:59] Because, I mean, I've been diving throughout the Pacific for years and years. And of course, the lionfish are just part of the reef community that you see in the Pacific. But then you have a different makeup in the Pacific reef community. It's different than you have in this hemisphere.

Jesse Cancelmo [01:54:18] But, it's a invasive species, the lionfish. And, it began, what, most people believe that there was an aquarium release in Florida, this was back in 2011 or so timeframe. And so, since then, lionfish have been ... they reproduce very, very, very rapidly, very quickly. And lionfish, they've gone all the way up the eastern seaboard of the United States, and they've made their way to the Flower Garden Banks.

Jesse Cancelmo [01:54:59] And some argue that they just, kind of, made their way too easily to the Flower Garden Banks via the platforms that are out there. They kind of skipped from one platform to the next and then easily made it to the Flower Garden Banks.

Jesse Cancelmo [01:55:19] But the reality is they would have probably gotten there anyway.

Jesse Cancelmo [01:55:24] But, the problem with them is they're indiscriminate eaters. And they can upset the ecological balance of the reef. You know, I mentioned already, they reproduce quickly, and they have few, if any, few predators. Very few predators. Really, yeah, in fact, I've been over to Cuba a number of times, and they have them in the reefs in the northern coast of Cuba, a lot of lionfish. And over there, they try to get the sharks (because there's so many sharks on the reef there: there're very, very healthy reefs off the northern coast of Cuba), and they try to train the sharks to eat the lionfish.

Jesse Cancelmo [01:56:04] But, the research, well, what is being done at the Flower Garden Banks is these annual Lionfish Invationals. And they have people come in and they have permission from the sanctuary to go down with spear guns because, any other day of the year, you're not allowed to (anyone), you're not allowed to dive on the reef in the Flower Garden banks with a spear gun. You're not even allowed to have a spear gun within the boundaries of the National Marine Sanctuary. Not even if it's locked up below deck. You're not allowed to have a spear gun.

Jesse Cancelmo [01:56:44] So on these Lionfish Invationals, that are done typically on the Fling, you'll have a group of, you know, 20 or 30 divers. They go down spearfishing, and they remove lionfish from the reef. And with the people that are studying all this is, they say that these localized area removals are controlling, to a certain degree, the problems with the lionfish.

Jesse Cancelmo [01:57:16] And, in other places of the world, like Florida and other places, the lionfish are eaten. Actually, I ate lionfish for the first time two years ago. I had a lionfish dinner, and I was surprised. It was really tasty.

Jesse Cancelmo [01:57:33] But, they don't eat, they don't eat the lionfish from the Flower Garden Banks, because there's still a concern about ciguatera poisoning. And so, they don't eat them. And that's a problem, also with barracuda out there and other fish.

Jesse Cancelmo [01:57:56] But, anyway, it's, from what I can see, it's kind of stabilized out there. Yes, you'll see them, but it's not worsening - the lionfish invasion with these indiscriminate predators. You know, they'll eat anything. And, it is kind of at a stable situation, is my understanding.

David Todd [01:58:22] Okay. Very helpful.

David Todd [01:58:27] Well, you know, we're, I guess, getting close to the end of our visit. And I thought that this might be a good chance to just look back and think about, you know, how you see the value of the Flower Gardens, in your life and, and I guess for society in general, I mean, this is a place that most of us will not see. So, how do you, you know, attribute a value to it? And how do you see it?

Jesse Cancelmo [01:59:05] You know, that's a great question. And I tell you, I ask this question. I have bounced this question off a lot of people in the last few years because I feel and, you know, again, I'm an underwater photographer. I'm an engineer. I'm not a marine scientist. I'm not an oceanographer. And so, I can't start talking like a marine biologist, because I'm not.

Jesse Cancelmo [01:59:36] But I believe, and this is just my own personal opinion, that the value of the Flower Garden Banks National Marine Sanctuary remains underestimated. I think there's a lot more value there than it's being given credit for. And all through the procedures that we had to go through for the expansion and all of the back-and-forth between the environmental section and the oil and gas folks, I saw that, there is an underestimation. And again, this is my opinion of the value of the Flower Garden.

Jesse Cancelmo [02:00:27] I mean, if you look at the coral reefs just in general in the world, and this is just a coral reef thing, but, you know, our coral reefs cover less than 1% of the ocean, yet they are habitat for almost a quarter of all marine species.

Jesse Cancelmo [02:00:47] And I think that the problem right now, David, and it's becoming less and less of a problem every year because more and more research is going on. But the connection between the reefs and the oceanic elements, the oceanic fish hasn't been well enough established - the importance, the dependance is what I'm talking about. The ecological connection. The area of ecological connections is a work in progress, big time.

Jesse Cancelmo [02:01:26] And I think if that was further developed, what would happen is there would be more and more value attributed to the reefs, to the coral reefs. But the coral reefs, everybody knows, they're all around the world, they're complex ecosystems. And there's thousands of species of fish and hundreds of species of coral, and they are source of food. We have critical medicinal components for treating rare diseases. And, you know, if you go and Google online, you'll see all this stuff of all the things that coral reefs do that most people, don't even think of.

Jesse Cancelmo [02:02:07] You know, in places, if you go to places like Bermuda and Hawaii, the coral reefs are major tourist attractions. And they're so important for the economy of these places where there's tourism.

Jesse Cancelmo [02:02:21] Now, they're also important for protecting. You know, one other aspect of coral reefs, depending on where you're talking about. Bermuda, for example, is they protect the island. If there's a hurricane, the reefs protect the island.

Jesse Cancelmo [02:02:34] But, the thing is, how do you put a value on it? Believe me, this is all being worked on. There's people, I've talked to people in Washington, in Steve Gittings' office, who was the first, Steve was the first sanctuary manager. I mentioned that, and now he is, he's like a science director for all of the sanctuaries. And he's still there in Washington.

Jesse Cancelmo [02:03:03] And I've bent ears, a lot of people's ears about this value, because that was one of the problems we had when we were up against the oil and gas industry is they would say, "Oh, well, look at here's our value and see all this oil, and all this energy? Here's how much it's worth. And okay, so you want this?".

Jesse Cancelmo [02:03:28] And, you know, it immediately went off in my mind, "Well, wait a minute. There is value, there is more value than you're talking about." But then the determination of that, and the proof of that, hasn't been ... it's not strong.

Jesse Cancelmo [02:03:46] But, my feeling, you know, I've said to some of these guys, I've said, "Look, what would happen to all of the snapper and all of the food fish, you know, you can put a number on all of the fish outside the sanctuary, swimming around the Gulf of Mexico that the fishermen catch that end up, you know, the grouper the snapper, that end up at the fish market that people eat, not just in the Texas coastal area, but around the world, or I should say around the United States, around the, you know, the West Coast, the East Coast. The Gulf of Mexico is a huge, huge source of our fish.

David Todd [02:04:28] Well, how can you attribute all of that to the coral reefs that are there? Well, you can't.

Jesse Cancelmo [02:04:34] But is enough of it attributed to it?

Jesse Cancelmo [02:04:38] And I would say, "Well, what would happen if tomorrow these coral reefs were just completely wiped away to a sand or mud bottom? What would happen to all of the fish stock in this area, the Gulf of Mexico? Would that connect? Is there a connection that would cause them to decline or be damaged?"

Jesse Cancelmo [02:05:03] And the answer is, "Well, we're working on that."

Jesse Cancelmo [02:05:07] So, scientifically, I think we need more research done so we know there's a stronger connection, and there's more worth, and there's more value that can be attributed to these special coral reefs in the Gulf of Mexico.

David Todd [02:05:28] So, one of the things that I thought was really interesting when talking to some of your fellow Flower Garden enthusiasts, is that, back in the day, it was possible, it was more sort of the norm, it was more accepted, to touch some of the marine animals. I think people have mentioned several times.

Jesse Cancelmo [02:05:53] Yes.

David Todd [02:05:53] You know, swimming with mantas, and swimming with whale sharks, and actually caressing them and, you know, stroking them, scratching them, rubbing them. And that that was something that some of these creatures really seemed to like. But, now I think it's sort of frowned upon. And I'm wondering if you think that, that we've lost a certain connection that was once possible, one kind of encounter, or do you think that this is the kind of respect and distance that we ought to maintain?

Jesse Cancelmo [02:06:24] Oh, the latter for sure.

Jesse Cancelmo [02:06:26] And I can tell you, David, that, I have videos that I took back in the early 1990s of divers at the Flower Garden Banks riding manta rays and stroking them and petting them and all that. And you can't fault them for back then, because it was ignorance. The divers just didn't know what we know today. What we know today is that when you do that, even if the animal likes it as you do that, you're wiping away some protective ingredients that are on the surface of these animals that are there for combating viral and bacterial infections for example. And the marine biologists will show you this, show you evidence of this.

Jesse Cancelmo [02:07:22] It may not, the animal doesn't know any different, but there can be harm from stroking and petting and holding on to whale sharks and manta rays. And it's definitely a no-no. Nobody, it's highly frowned upon, and essentially nobody's, you're not going to be seeing people doing that at the Flower Gardens Banks National Marine Sanctuary.

David Todd [02:07:50] Okay. One last sort of specific question for you. I think it's not something that, you know, you need to advertise, but I think it's intriguing that you have these very different lives where, you know, you're out in your boat, you've got your SCUBA gear on, you got your camera equipment, and you're exploring these reefs, you know, during your holiday times. But then you've got this career that seems to have been very demanding as a mechanical engineer in the oil industry. And I'm wondering how you correlate these two sides of your life. How do they connect, or do they?

Jesse Cancelmo [02:08:32] Yeah. You know, I'll tell you, David, I loved reading that question. I thought that was a great question. And nobody's ever asked me that before. And really, I was very, very fortunate in my career. I worked for two, you know, Fortune 500 international engineering and construction companies, and I was fortunate enough to be able to retire at age 60. And then, you know, which to some people, "Oh, that's early", you know. Well, I wanted to, I would have liked to have retired from that, five years earlier. But, you know, you can't retire until you have enough money.

Jesse Cancelmo [02:09:14] So, I was fortunate to be able to retire at age 60 and then immediately, expand, greatly expand, the time I could devote to the ocean, underwater photography, traveling, being able to then go and get a seat on the Advisory Council and do the things that are really near and dear to my heart and I am passionate about.

Jesse Cancelmo [02:09:40] But I look back at my career and industry and working for these different companies. And I was involved in overseeing a lot of very fascinating projects, interesting projects. And you mentioned oil and gas, and yes, I was in that sector for a number of years. But I also spent a few years in the pulp and paper industry. And I'm the engineer of record on one of the very first 100% recycled containerboard mills in the United States, in Kentucky, on the Mississippi River. And it's completely, 100% recycled. And that's something I'm very proud of that we did on that project.

Jesse Cancelmo [02:10:30] But you were asking about, the connections between your career as a mechanical engineer. And really, I worked in the beginning years as an engineer doing actual engineering work and then moved into management. But, what I would say is that there are a lot of similarities, or what I should say is not similarities, but attributes of the way I think and the way I do things that are the same, whether I'm doing, I'm trying to plan a trip, or lead a trip, or planning an article for a magazine or whether I'm working with an engineering and construction company.

Jesse Cancelmo [02:11:25] And I'd say, the first attribute would be my ability for viewing the big picture as well as getting, looking at the various components and even getting into the weeds if I have to. And these are attributes that helped me, when I was an Advisory Council member at the Flower Garden Banks.

Jesse Cancelmo [02:11:51] But another one is my decision-making process. And it didn't matter whether I was in one world or the other world, but I always believed in maximizing inputs in intelligence before making an important decision and trying to, you know, come to a conclusion on something. This is an attribute that I would use whether I was on an assignment for SCUBA diving magazine or working in the Advisory Council or whether I was in my professional career.

Jesse Cancelmo [02:12:28] And I have an appetite for challenges. And that challenge also is across the board in my worlds that that I've lived in.

Jesse Cancelmo [02:12:38] And I think managerial ability has played an important part of what I had to bring to the Sanctuary Advisory Council.

Jesse Cancelmo [02:12:47] And, but I'll tell you the last thing I'm going to mention, but this is probably the most important of all, is my values for safety and health. And when somebody asked me, "Well, what, you worked for this big Fortune 500 company all these years and did all these projects? And what's the thing you're most proud of?"

Jesse Cancelmo [02:13:08] I'm the most proud of that every project I was in charge of, and there's a bunch of them, I never had a fatality. I never had a fatality. And I had hundreds, hundreds of people that were at the end of the day, it came up and it was on my desk. But, the safety that we were able to perform, and I look at that in the same way in, you know, safety in boating, safety in SCUBA diving. safety in everything you do.

Jesse Cancelmo [02:13:46] And I learned in terms of safety and, you know, I'll say health and safety, but safety in particular, I learned early on in my professional career in engineering construction that you don't you don't say safety is a priority. Don't ever say that, because priorities change. Safety has to be a value. That has to be a value. And that's stuck with me when I was 30 years old just learning about how to manage people is, when you go home for the weekend, you need to have that same value for safety that you do Monday to Friday, and it has to be a value in the way you live. And that carries over across my world. Safety.

David Todd [02:14:36] That's well put.

David Todd [02:14:39] Well, you've been very patient. That's another value. That must be one of your priorities, too.

David Todd [02:14:49] Just one closing question: sometimes we neglect to talk about something, we skip over something we meant to discuss. Is there anything you'd like to add before we close up?

Jesse Cancelmo [02:15:06] I don't really know. No, I think we've covered a lot, and I'm just happy to have spent this time with you, David. And being able to do what you're doing, I think is wonderful. And, I'm happy and thankful to be part of it, and I, I hope that what I've done will help in some way, but when it comes to the ocean, when it comes to Flower Garden Banks National Marine Sanctuary, I want to be able to do anything I can possibly do for its betterment and its sustainability. And that's the way I feel.

David Todd [02:15:50] Well, lots of contributions over the years and still to come. So, thank you.

David Todd [02:15:56] I'm going to turn off the recording now. We can, visit for just a little bit, if you'd like.

Jesse Cancelmo [02:16:01] Sure.

David Todd [02:16:02] But let me close this down so we can let you go on about your business if you need to.