

John la Grange – 2:12 03 December 2013

(questions by Paul Dayton and Theresa Talley)

Maybe you could run us through a little bit of your personal history, which I don't really know. I remember hearing bits of it through the years. But why don't you start where you started and where you think is interesting and worth recording.

>> My name is John La Grange and basically I've grown up in San Diego. We moved to San Diego when I was five years old and I've always been interested in nature and particularly the ocean. Even before we moved here we lived in Hawaii for a while, so my first introduction to the ocean was in Hawaii and my father was really into diving and spearfishing and fishing. We lived up in the mountains, in the Sierras for a while so my first introduction to fishing was actually trout fishing but it was not, my father wasn't a sports fishermen. He'd grown up in the mountains of Colorado during the depression and they fished trout in the streams there for food. But he always taught me fishing was a way to get food. It wasn't sport. I have maintained that attitude throughout my life. I've always enjoyed fishing but I've never done it as sport. If I didn't have a use for a fish I'd leave them in the water. So growing up in San Diego like all kids in San Diego we went to the beach a lot and got into surfing and fishing and diving and eventually I went to UCSD just because it was close by and still by the beach.

>> When was that?

>> I started UCSD in 1966. 1966. Yeah.

>> Just after it came, right?

>> Yeah, I was in the third freshman class at UCSD. My older sister was in the first class actually. And I was sort of under the mistaken impression well it must, being right by Scripps there we would have classes about the ocean and things like this in fact it didn't. It was all molecular biology and stuff like that. I ended up majoring in chemistry because the biology was full of, we used to call them premed weenies. So the biology classes weren't any fun at all. But I had a girlfriend while I was at UCSD who worked at the student employment office, so when like a really good-looking job came along she'd call me up and one of them was they needed somebody at Scripps to do some odd jobs. We went down there and did that, painted some of the old T buildings and hauled trash to the dump for a while. Then they had a deal they wanted me to go work at the national, in those days it was the Bureau of commercial fisheries office that was right there on campus. Doing data entry and on weather reports and things. Some kind of a trade-off deal between Scripps, they provided, Scripps paid me. I worked there at the fisheries lab and in return Scripps got the data.

>> Was that the (Carl Hunt's) lab?

>> I was actually working, it was a guy named Glen Flitner, must have been the head researcher. It was actually an albacore project. They were doing weather and oceanography and trying to relate the oceanography to albacore and predict where the albacore were going to show up and things like that. But as part of it, they had basically like a weather service there at the fisheries lab. Where they would print out all the weather maps and they gathered the weather reports and in those days, this was pre-satellite. So the weather information came from ship reports. And the WWD radio station right there on campus collected weather reports from all the Scripps ships, wherever they were in the world, and they all went into the office there at the Bureau of Commercial Fisheries and it was all compiled there. And that fed into the National Weather Service. Anyway I was there doing data, basically manipulating data

that was on tickertape and punchcards in those days. But, well to make a long story short I fished there, I worked there for several years while I was going to UCSD. And then after I graduated I worked there for a couple years.

>> What year did you graduate?

>> I graduated 1970.

>> Okay, but you were working at Scripps in 70 then?

>> Yeah I had actually by then I actually changed over and was working for the Bureau of commercial fisheries which, somewhere right in there it became the natural fisheries service. Yeah. So I started working actually at Scripps it was probably in 68 or 69. Probably 68. Yeah.

>> So then you graduated and you had a job with---

>> I had a government job, yeah.

>> But it was weather recording?

>> I had gone on from that. I started working for a guy named Sus Kato and his job was developing fisheries, developing underutilized fisheries resources. Sus Kato was a great guy. I just saw him a couple months ago at the dedication of new fisheries lab there. I hadn't seen him in years and years but he came for that. We had a good time. I was his technician. We did all kinds of things. One of which was, he started the urchin fishery in California. And he was Japanese-Hawaiian. He grew up in Hawaii. But he still had contacts with Japan and the Japanese and he knew that there was a big market for urchin in Japan. So he decided to send some urchins over, some of the local urchins that we had here which at that time considered a pest. Kelco was dropping quicklime on them, trying to kill them in the kelp beds and stuff, trying to get rid of them. So, by then I had become a certified diver. I got certified by a guy named James Stewart down at Scripps. I went to his class. So I was a diver for the fisheries lab there. So they sent me and another guy out there to get the urchins. And we went down in Mission Bay, Scripps had a little boat town there for odd jobs that we got to use, but we got down there and the battery was dead and the boat couldn't get started. So we went down to the jetty and dove off the jetty and got a bunch of urchins and brought them back to the lab and broke them up and took the eggs out. And at that time the Japanese liked the little wooden boxes that were okay. I had made all these little wooden boxes and put the roe in there and shipped it off to Japan and they really liked it. So, within a fairly short amount of time Sus had gotten in contact with a bunch of divers, abalone divers, and the fishery developed pretty rapidly. For a while it was the largest fishery in terms of value it was the largest fishery in the state of California. Pretty important fishery. And it still is a very important fishery in California. But that was the kind of thing, that was probably the most successful project we did. We did other things like he did an experiment with swordfish longlining. Back then. I made up a bunch of swordfish gear and had a fisherman go down and try it on the bottom and he caught swordfish.

>> With a hook?

>> Yeah, with the line, long line. Pretty primitive.

>> What year was that?

>> That would have been in 69 or 70. And then I got grabbed when the tuna porpoise controversy just was starting to be exposed. And Bill Perrin had gone out as a graduate student on some tuna boats and had seen the porpoises being caught in the tuna fishery. He was working on the taxonomy of the porpoises actually at the time. But he saw how many porpoises were being killed in that tuna fishery and so they started to look into that. In 1970, they decided to put observers on the tuna boats. His lab was right next to Sus Kato's lab so when they started looking around for who they could put on a tuna boat, they grabbed me. And sent me out on tuna boats in 1970. At the beginning of the tuna season there in January there were I think the three of us went out. We were the first, other than Bill (Perrin), we were the first three porpoise observers on the purse seine fleet. I made a couple trips on tuna boats. Including that second trip I did was with Harold Medina, you know, when he had just invented the Medina panel and the industry had said this is the solution to the porpoise problem. This Medina panel. They said well great we will send an observer out. He didn't want to take an observer. You know. But they ended up they talked him into it and they sent me. So I made a trip with---

>> So you were one of the first observers with---

>> Yeah. I was. I think I was officially observer number three. Yeah. But anyway, so, I was exposed to the fishing industry that way, through the things that we had done working with Sus Kato as a fisherman in his developing fisheries and with the tuna fishermen through the porpoise project. But then Sus Kato got transferred through a big reorganization he got transferred to the big Tiburon lab and I didn't want to go up there. So I stayed and they put me in doing chemistry which by then I had a degree in chemistry and they had a project looking at contaminants in the ocean system there. This was right after the DDT thing came out, that Montrose had been dumping all that DDT into the ocean in LA. So we were testing fish and plankton and everything in the ocean for chlorinated organics. So I was running a gas chromatograph in the lab for a while. And I really didn't enjoy that. I had enjoyed being on the fishing boats much more. So in 73, I think it was, I just kind of quit at the fisheries lab. We went on a long car trip to, down the coast of Mexico and Central America surfing. For about five months. Then I got back and I thought well, what am I going to do now? So I decided to go fishing, so I bought a skiff and I started fishing and I had no idea what I was doing. But I started hand lining for rockfish, rock cod, they called them in those days.

>> Just off Point Loma?

>> Off Point Loma, Nine Mile Bay, down into Baja, then down, wherever I thought I could find them.

>> So how big was your boat?

>> The very first one I had was about 18, 20 foot skiff, wood skiff that fell apart pretty quickly. Then I got a nice 20 foot Blackmon. Fiberglass skiff. It was actually one of the first skiffs that Don Blackman made. One of his first boats. It was a real nice skiff. But not knowing anything about the fishery, we were kind of hippies in those days and it was kind of a back to earth hippie thing, you know people wanted to grow their own food. But it was part of that. I'm going to go catch my own fish out of the ocean. Which, I did catch some fish, but right about that same time, the some of the local Italian fishermen figured out that you could catch rockfish in gill nets. They set gill nets on the bottom on the rock cod banks and could really catch a lot of rockfish. Before that it had all been done with hand lines. So I was fishing with a hand line and the other guys all started fishing with gill nets.

>> When did the gill nets come in?

>> It was probably around 1973, 73-74. I think it was probably early 74 when I started fishing and they had started using them probably just a little before that. Yeah, they pretty rapidly kind of cleaned the banks off with the gill nets. And I was kind of, I thought this obviously is not sustainable. Fish and game will do something about this pretty quickly. They are obviously wiping out the fish. Well, after a couple of years it was clear that I was not making any money. I was going bankrupt and the guys that had started gillnetting here locally had all they'd cleaned off the banks to where they couldn't catch enough rockfish to make any money either. So but they'd made enough money that they could buy bigger boats and more gear and go fish something else, whereas I had gone broke. So I learned a lesson there. I said, you know, if dynamite is legal, use dynamite. If you're going to make a living fishing you've got to do it in a way that is economically sustainable. You know, if everybody else is using gill nets and you are trying to do it with a hook and line you're not going to make it. So, at one point, oh I guess what really stopped me was my wife got pregnant. I thought, oh man, having another baby. Okay this is our second, we don't have any insurance or anything, so I got a job at National Steel and shipbuilding because they had health insurance.

>> That would've been about because it was the same time as my wife got pregnant, about 73 or four is that right?

>> Yeah, that was CC, so yeah. She was born in 76? Yeah I'd fished for couple of years.

>> So then you got a job.

>> I got a job, yeah. But then when CC was born everything was fine. We ended up not even needing the insurance. She was born at home, we never even took her to the hospital or anything. So I realized I didn't really even need the job anymore. I met a guy, a friend of mine introduced me to this guy. He wanted to invest in a fishing boat. And he didn't know anything at all about fishing and I'd learned a little bit about it, so he wanted me to pick out a boat and he was going to pay for it and then I was going to run the boat and it was going to be an investment for this guy. So I started looking at fishing boats and I picked out one that I actually kind of knew it was a guy who sold fish to the same market that I had sold fish to. And it was, I'd bring in a little box of fish and he would bring in big boxes of fish. He was gill netting with this 38 foot boat that he had. He had gone on to, he invented skateboard trucks and became a multimillionaire and publishes a bunch of magazines and stuff now. He wanted to sell the boat and I picked this boat out. The investor guy didn't like the boat because it was an older boat. It was strictly a commercial fishing boat. It didn't look fancy. He had his eye on this swordfish boat that was more of a kind of converted yacht thing. And I didn't think I could necessarily make a living on a converted yacht. I thought I could, what I'd learned about fishing and what I'd seen this other guy do with this boat I thought I could make a living on that boat. So the deal kind of fell apart, but then I started thinking well, I had done the homework. I had kind of a business plan figuring out what I could catch and what it would be worth and what the payments on the boat would be and I realized if I refinanced my house I could buy the boat myself. I didn't need the investor guy. So that's what I ended up doing. I bought a boat called the Kitty Lee, which was a 38---

>> What year was that?

>> That was in 76. It was a 38 foot Kettenburg, which was, it was a real common boat. They were built right after World War II at Kettenburg Marina, down here in San Diego. Wooden boats. And I think there were about 50 of them built that were all basically the same. They were pretty successful boats. They were used for tuna fishing, albacore fishing, trolling, local gillnet boats. They were really efficient little boats and mine had a 371 diesel in it and it would burn not very much fuel at all. They

were real slow, but they carry a fair amount of fish. And fairly seaworthy. They were not built really heavy, so they were, by the time I bought Kitty Lee in 77 they were fairly old and a lot of them had sunk. They weren't the most seaworthy boats but they were really economical. And I fished that boat, I started out fishing rockfish because that's what I knew. By looking for them fishing with a hand line I had figured out where rockfish lived and I could find them where they were.

>> How did you find your way around back then? Did you just use sonar or know your bottom?

>> Yeah just by knowing the bottom, we had depth sounders, but we didn't have GPS.

>> And the old Loran navigation were plus or minus.

>> Right, well, they had loran.

>> Loran in those days wasn't the most accurate.

>> No, especially for some reason in this area you could only get one line. So it was pretty worthless, really. On my smaller boats I didn't have loran. The Kitty had loran but I never used it much because you could just get one line

>> I didn't either.

>> We relied on, well we used basically just knowing the bottom. We would go by the charts and watch the sounder pick up the bottom features and after a little while you learn you know, you would learn the bottom, tell where you were by what the bottom look like.

>> Just by knowing the bottom. That's important.

>> So I started fishing in 76 on the Kitty Lee, bought the rockfish gillnets. And I fished around. My idea was to fish in Baja because the boat had a Mexican permit. So I was able to fish in Baja and I thought fishing down there, it hadn't been fished much for rockfish I thought I'd get them. Turned out not to be the case. I made a few trips down there and caught some rockfish, but they really weren't that thick in Baja. I think it's just at the southern end of their range and it was actually surprising how few rockfish there were down there, even that far back. Then I started fishing around the Channel Islands, Catalina, then I moved up around Santa Barbara island and started doing pretty well, actually. To where I was actually making money. It got to be like to where I could go out and expect---

>> When did you go to the Channel Islands do you think what year?

>> 77 or 78, certainly by 1978. I was fishing around Santa Barbara Island, Osborne bank and there's some other banks out there. Fishing the deeper water up there. It was pretty, some of those banks were untouched at that time, pretty much. So you could find a new bank and with the gillnets you could really catch a lot of rockfish.

>> What species were they, do you remember?

>> Well, it was a huge mix. But, we caught a lot of cow cod up there, which are impressive to everyone because they are big and impressive but probably the bulk, one of the more common ones was the bank perch, the red Bank perch. (sebastes rufus) Which, you catch big catches of those if you

got the right spot. Chili peppers, (Sebastes goodie), bocaccio (Sebastes paucispinis) were common. Those three were actually probably the most common; bocaccio, chili peppers and Bank Perch were probably the biggest part of the catch.

>> But not that many of the cow cod?

>> By numbers probably not that many because they are so big they'd be a fair amount of weight. They all sold for the same price and of course reds, a mix of everything. Interesting, probably getting off track here, but one thing that interests me, recently have seen all the regulations that have gone in to protect the rock cod and one of them they really worry about is the yellow eyed rockfish and they've got big closures in Southern California because yellow eyed rockfish are so rare. I never caught a yellow eyed rockfish in my entire career of rock cod fishing in Southern California. It just seems ridiculous to me that they're trying to protect the yellow eyed rock cod in Southern California. It's just out of their range.

>> Where is their range?

>> Further north, yeah.

>> [Inaudible]

>> Yeah, so I was fairly successful fishing the rockfish. I was making money fishing the rock cod. But then in 78 it became albacore season and in the spring everybody would go albacore fishing. So I decided to go try albacore fishing in June or July 1978. So, I put the trolling gear on and boy I'd never fish albacore before. Actually, I guess I trolled a little bit on some research trips when I worked for the fisheries. I knew quite a bit about the albacore fishery because I'd worked for group that was working on albacore for the fishery service, but I had no real practical experience. My crewman was John Isaacs, John Isaacs Junior.

>> Oh really?

>> Yeah. He and I went albacore fishing.

>> I'll be damned. That's cool.

>> We did pretty good. The price of the albacore was pretty high compared with rockfish. We got a lot more money for the albacore and it was a lot less work than gill netting rockfish and we were pretty happy with that. We made a trip off the southwest of San Diego down off Baja. I forget exactly what we got but we got a few tons of rockfish and brought them in and sold them at the Van camp), the new Van camps cannery that had just opened up right on the terminal. A really nice facility there. We got a pretty good check from the cannery and wow, that was great. So we went on up, then the fish moved North and everybody would normally move North for this season. Then we fished, made a trip out in Morro Bay and ended up on the next trip we ended up in San Francisco and unloaded another trip there. Then the weather got bad, and---

>> Where did you learn to skipper your boat, all of the navigation and the things that go into keeping the boat going?

>> I, well I started out in a skiff without any navigational equipment. So it was all by looking at the

chart. I had charts I had charts and I'd study the charts and I'd do just timing. Okay I know how fast the boat goes I want to go this far, I would go by my watch. Then start checking and I got lost a fair amount. You know. But a lot of guys got lost in those days, you know. A lot of times you didn't know where you were really. In fact on that trip when we ended up in San Francisco we were fishing off Morro Bay of course out of sight of land I don't think the loran even worked at that time. We weren't using the loran. So I'd kind of stick with the fleet but then one night everybody, there was a big bite up off San Francisco so everybody ran all night to the north and we did too. But we got separated from the fleet during the night. So when it got light in the morning we looked around and we didn't see anybody, didn't really know where I was. I knew I was up off probably off San Francisco somewhere. So, I was wandering around and I wasn't catching any fish. You know I could talk to the other guys on the radio, but they didn't know where they were really either. But I couldn't see them. So I said well going to run straight in toward the coast until I can see some mountains and I'll figure out where I am. So I started running in and after just a short while I saw a big disturbance in the water up ahead and it turned out it was albacore, schools of albacore just frothing on the surface you know, there were no other boats around, so we started---

>> [Inaudible]

>> No, we were trolling.

>> Just trolling?

>> Just trolling.

>> Wow.

>> Jon and I would just throw them over both shoulders and we called our buddies and said yeah we are really getting them here and they said where are you and we said I don't know. A likely story. But we didn't really know where we were. So, we caught a lot of fish that day, but then that night a storm front moved in. So the weather got rough and we ran into San Francisco and that was the end of the trip.

>> You just went to shore until you saw the mountains?

>> Yeah, I actually followed another guy who seem to know.

>> [Inaudible]

>> [Inaudible] right into the Golden Gate there.

>> Because the old charts always had the mountains. It was pretty helpful.

>> Oh yeah.

>> So that was about 78 or nine?

>> That was in 78. So I made enough money fishing albacore that I could buy some more fishing gear. And the boat that I bought originally, they had made a lot of their money fishing white Sea bass in Mexico. The price was higher on white Sea bass. It was getting close to a dollar a pound for white Sea

bass even back then. But I didn't have the nets when I bought the boat and they are pretty expensive and I didn't have the money to make the nets. But in that albacore season I made enough money that I could make white Sea bass nets. So when I got back from albacore fishing I did that. I built white Sea bass nets and started fishing in Mexico. And I had kind of started to get to know some of the local fishermen. Fishing the albacore I started to run with the one guy Al (Neese) who had another Kettensburg, another 38 foot Kettensburg, the "Southwind" and we ran together quite a bit. And he was in the sea bass fishery. He was going Sea Bass fishing. And I got to know, started to get to know the local Italian fishermen who were in that fishery. There were several Italian fisherman who had fished in that fishery for years and when I started fishing down there it was a pretty, it was a small group. And so everybody talked to each other and would help each other out. Pretty much. There was still a little bit of cutthroat stuff, but they were pretty cooperative. Looked out for each other. Because in those days off the coast of Baja, you were out in the boonies, you know. It was pretty much wilderness. (Is that going to...?)

[phone ringing]

>> Should I get that, or your call. If you want to answer it.

>> [Inaudible]

>> Just pause it.

>> [Inaudible]

>> You know, I'm going to move, just worried about the light so I'm just trying to...

>> {Inaudible} those junk phone calls anyway.

>> We never answer the phone.

>> I don't normally either.

>> Want to leave a message [inaudible].

>> If I hear it is somebody I want to talk to I will pick it up.

>> Exactly. That is very rare.

>> Yeah.

>> I think we could make some money if we could figure out how to program a telephone like a computer so it doesn't ring or just ignores, your program understands.

>> Yeah really, a spam filter.

>> You look out and find out what number it is and just hit spam if they are unidentifiable, you just, the machine does not answer. It just doesn't.

>> You could always[inaudible] probably \$1 million idea. Let me know when you are ready.

>> I'm just trying to lower it, now it's all...

>> Where was I?

>> We have to remember where we were. Basically, you were moving from albacore to white Sea bass, which it would be neat for me as an ecologist if you remembering the quantities and white Sea bass are never something to worry about because there were so many of them. So wait, I would like to get that, though.

>> So when I started fishing down for white Sea bass off Baja I really started working with a crew of guys that had been doing a lot of them had been doing it for years and years and really knew the areas down there. Because it was such a remote area and we finished a long ways, we finished as far down as, well, (I commonly) went to Abreojos and some of the guys went as far as Cabo San Lazaro, which is down off Magdalena Bay. And these were pretty small boats. I don't think, the biggest boat were maybe 50 feet. And my boat was kind of small for it, the 38 foot Kettenburg. But there were I think at least three other 38 foot Kettenburg's that were in that fishery at that time. We'd make three week trips down. With ice and the fish were brought in on ice.

>> But you were still trolling permitted?

>> No, that was with gillnet permits.

>> For the white sea bass.

>> Yeah and there was basically, there were two different fisheries for them down there. During the winter we'd fish bottom nets. And you'd set the nets and usually around rocky areas on the bottom and it was kind of, it wasn't necessarily really lucrative. It was kind of scratch. Every once in a while you'd get a good run and do pretty good, but a lot of times you get a few here, and a few there and you'd have to move around a lot and you'd catch a mix and get some yellowtail mixed up with it, with some soup fin sharks you'd bring back. The real, the hard-core some of the old-time Italians, they wouldn't bring back yellowtail because it was a much lower price. If they caught yellowtail they'd throw them over the side. They wanted to fill the boat with sea bass. I wasn't that fussy. I'd take anything I could get. But then in the spring the white sea bass spawned in those areas and they would come up to the surface and then we would float the nets on the surface.

>> So you were getting the spawning aggregations.

>> Yeah. Those were the lucrative trips because you could go down and in a few good sets you could fill the boat with, and it was pretty much straight sea bass at that time. We didn't catch much yellowtail.

>> Did the spawning aggregations happen in the same place year to year?

>> Yeah they did. Well, there is of course the coastal upwelling on the coast of Baja, and in the spring the coastal upwelling is really strong and the water will be really cold down at Abre Ojos in the early spring, the water would be in the 50s and that's cold.

>> I know.

>> And then the warm water will start pushing up, though, in late spring. And the sea bass seemed to spawn kind of on that interface where the warm water started pushing up against the cold upwelling water. We would look for what we called the chocolate brown water. Full of plankton, real brownish water. And that's where we'd get the sea bass with the drift nets. We'd set the nets on the surface there, put floats on them, put floats onto the cork line as you set the net. The old-time guys had a completely separate sets of the nets. They had specific drift nets that they made for that part of the season. That were deeper. Deeper nets. And the bottom nets were shallower, had heavier cork lines. And the other thing about the drift season is you didn't do much damage to the nets. Fishing with the nets on the bottom you really ripped up the nets, catching on the rocks and coral and things. There was a lot of net damage. So it was a full-time job sewing net to keep the nets repaired when you are doing that. The drift net fishing on the other hand was very low damage to the nets. So it was kind of a good break from the bottom net. So we did that. I just floated my bottom nets. I didn't build a separate set of drift nets. I just didn't have the money at that time. And that was, I did fairly well at fishing the white sea bass. And then in 79, I guess, there were starting to be rumors, in 78 there had been a huge sword fish year for the harpoon fishermen. It was the biggest year ever for harpoon sword fishing in Southern California. If you look at the swordfish catch records it was actually one of the biggest years ever, even when the gillnet fishery got going there were only a few years when they exceeded the catch of the harpoon fishery in 1978. So it had been a really good year for the swordfish fishermen, but there were some rumors that a guy had caught some swordfish in a drift gillnet. There were some drift gill nets, the guys were fishing thresher shark. They started to run in Santa Barbara I think. Nobody in San Diego was doing it. But we had heard stories about you could catch thresher sharks in gill nets. Then we also heard that these guys had caught some swordfish in the gill nets. So I decided to try that. And I built a net that I thought would work for sharks. I got some 10 inch mesh. I forget how deep it was, but it was a little deeper that I would use for sea bass and hung that, I put that together with some of my sea bass net and one guy had tried it out of San Diego. He'd gone out and he'd caught some thresher sharks and quit doing it for some reason. So I put together my sea bass net and this piece of shark net that I had built and I went out and set it off La Jolla and the first night that I set it---

>> How far off La Jolla?

>> I don't remember exactly, but probably out over the deep water, not over the shallow water, maybe like six or 8 miles off or somewhere. Where I had seen some signs I don't remember where. But I do remember that I caught some thresher sharks and I caught a swordfish the very first night I set this thing. I'd never caught a swordfish before. Even back in those days the swordfish was the highest price fish you could catch. By quite a bit. We were, probably getting like three dollars a pound for swordfish whereas we were getting a dollar a pound for white sea bass. So that was really encouraging so I kept doing that and I built some more net. And I started doing pretty well fishing, I moved further offshore.

>> By now you are catching more swordfish?

>> No I was still, I was targeting thresher sharks. And I was doing pretty well on thresher sharks. And I think I didn't even go sea bass fishing that year because I was doing well enough on the thresher sharks. It was getting close to, I want to say I was getting nearly the same price for the thresher shark that I would've been getting for sea bass at that time. It was a lot, you know I was fishing between Point Loma and San Clemente Island for the thresher sharks, whereas I'd go on a four or five day run down into Baja for sea bass. So I built, you know, that fishery was developing. We were working on, nobody knew what kind of net use, really and the 10 inch mesh was a disaster because it worked really well for sharks, but most of the sharks that are out there are blue sharks. At the time there was a huge population of blue sharks out there. So we'd just catch jillions of blue sharks in that 10 inch mesh. So I

gradually made bigger mesh. I think I went to like 15 inch. Pretty quickly I got up to, I was using 22 inch mesh for my shark, swordfish nets. Which really cut down the by catch of blue sharks. Just about eliminated it. Which wasn't all good, because then the blue sharks would come around and when you'd catch a swordfish, they'd eat your swordfish. With the smaller mesh the blue sharks came up to the swordfish they would get stuck in the net and could not really do much damage. But that fishery became, that was a really good fishery for a while. It was illegal at first to catch swordfish in gill nets. You were only allowed to catch them with harpoon or hook and line, which nobody caught them on hook and line. But you could catch them with a harpoon. So we of course all got harpoon permits. Even though we were catching them in the gillnet we would claim that we caught them with a harpoon. That went on for years. Some of the San Pedro fishermen that I met in the sea bass fishery really, they knew more about the swordfish end of it than I did. They had fished swordfish, harpooned swordfish and I knew a guy named (Larry Mansur) was actually the first guy that caught swordfish in a gillnet. He was out at Dana point, actually. But these guys knew Larry Mansur and they knew more about what he'd been doing. So they had built swordfish nets essentially. They'd built nets specifically with the idea of catching swordfish. We formed a code-group of swordfish fishermen.

>> They were illegal?

>> Yeah.

>> So they were harpooning them when they brought them in?

>> There were guys who actually used to poke holes in them. I never did that. But, so it was sort of semi-illegal for a while. And I remember one time we were all fishing up south of Anacapa Island and we had pulled the Nets, and then the fish and game patrol boat showed up, and he was zooming around and he stopped one of my code-boats and wrote him up. He had a couple of swordfish on the boat. And he wrote him up for this and he gets on the radio told us, and said sure enough, I see the patrol boat and he's coming my direction. You know I had a couple swordfish on and one thresher shark. I think I had only one set or something. So I took off and I pulled the swordfish out of the fish hold...I probably shouldn't be saying this, but maybe the statute of limitations has run out. So I pulled the swordfish out of the hold and I tied a buoy on the tail and threw them over the side and made like a 90° turn and went off in the other direction. So the fish and game patrol comes after me and they stop and I stop and they sent over this poor fish and game warden that they'd gotten out of the mountains somewhere. He was this young guy and he was just green. He was so seasick. He came on the boat, he looked down at the fish hold, the only thing left there was the one thresher shark. He looked in and said what is that swordfish doing in there? I said that swordfish is a thresher shark. He said, oh, okay. They went on their way, and then I went back and picked up my swordfish which had a couple shark bites out of him by then. At least I didn't get written up. But then we got into, there was the guy, one of the guys I worked with was Tony West out of San Pedro and he'd been a schoolteacher and had fished in his spare time for years and eventually quit and became a full-time fishermen. But he was in the fish politics. He was kind of a politician. So we started going to meetings with the fish and game department. Trying to get the swordfish gillnet fishery legalized. Which we eventually succeeded at, largely because of Tony's efforts. We made a lot of trips to Sacramento and talked to legislators and back and forth.

>> What year was that? 80?

>> Around 1980, yeah, 80, 81? Somewhere right around then. I remember some of the meetings were pretty funny. One of them was in Long Beach. The fish and game had an office there in Long Beach. And I went up with a friend of mine that he was part of, the second guy that started fishing that did the

drift gill nets for thresher sharks in San Diego. He was one of the Italian guys I fished with in Mexico named Pete Bompensero and Pete was kind of an old-school Sicilian kind of guy. His uncle, uncle Frank was a notorious Mafia hitman. You know, but so, we were going to this meeting in Long Beach and it was going to be a meeting between the harpoon fishermen which were really against the gill nets, and us gillnet guys and we were supposed to sit down at fish and game and work this out. So I rode up with Pete in his big white Cadillac and there is a big table and we all sat down and we were going back and forth and the harpoon guys were saying they're going to destroy the fishery, you know, the gillnet guys are saying you guys don't catching enough fish to make a sandwich out of anyway. Going back and forth. Pete said, "in the old country we would've solved this with shotguns". But fortunately it didn't come to that. But we eventually got it legalized. It became legal to catch swordfish in a gillnet. Originally there were restrictions on it. It was first legalized as by catch. It was legal to have a by catch of swordfish in a shark net. But the deal was that you had to have more shark than swordfish for it to be called a by catch. You had to catch more sharks than swordfish. Well this was, it became a problem because sometimes sharks were harder to catch than swordfish. And plus, much less valuable. So that went on for several years and I fished sharks quite a bit. Because I'd started out fishing sharks and I kind of figured out how to catch thresher sharks. So I was pretty good at catching thresher sharks and it wasn't a problem for me most years. I always caught enough sharks to cover my swordfish. We catch sharks earlier in the season to catch enough to balance out your swordfish. It did get me one later year but that's another story. But about the time when we started we'd developed these swordfish nets and it became obvious that, you know, if you had the right net you could catch a lot of swordfish and if you didn't have the right net you didn't catch too much. We kind of started building bigger and bigger nets.

>> Bigger mesh you mean?

>> Bigger mesh, longer and deeper.

>> What is the optimal mesh for swordfish?

>> I'm not sure but like I said I used 22, I might've even had 24 inch mesh in my nets, which I went bigger than most of the guys. 18 inch was real common. And then heavier thread, we would go to heavier thread just to keep the damage down. The heavier thread net would last longer. If you'd use a lighter thread, like 18 you'd pretty much have to throw your net away at the end of every season and build a new one, which, it would cost about \$20,000 to build one of those nets. The heavier twine you'd try to get a couple years out of a net. The nets got pretty heavy. We were still in the small wooden boats. For the most part. I was still in the 38 foot Kettenburg. And from pretty early on, the boats started rolling over because the nets were run off a reel which is mounted on the deck. So by the time you wound the wet net on the reel you had a lot of weight above deck on those boats. And in bad weather it really affected the stability of the boats. Boats started rolling over pretty early on and got worse as we started fishing further offshore, further north in areas that have worse weather and bigger nets all the time. And I really started to feel unsafe in the Kettenburg. A couple, by then I think a couple close friends that I had had lost boats. Somewhere in there, they started disappearing, too. But anyway, I decided I would make enough money that I could afford a better boat. So in 84 I think it was, that winter, Tony West and I both decided that we needed better boats. He had an old wooden boat too. It was bigger than the Kettenburg, but still an old wooden boat and we drove all the way up the coast to, all the way to the Columbia River looking at fishing boats. We wanted a bigger steel boat, thought it would be safer. He ended up buying one up in Oregon. I never did find one. Eventually I found one up there but at that time there was a big fisheries disaster up there. The shrimp fishery had collapsed up there and a whole bunch of boats had been repossessed by production credit association's up and down the coast there and there was a lot of foreclosed boats sitting in harbors all up and down there and I

actually made an offer on one. But it was some crooked inside deal. Somebody else offered him a dollar more than I did or something. Which was probably a good thing for me because I ended up, I came back to Southern California I heard, a friend of mine told me about this boat that was in Ventura that was for sale, called the Cloud Nine, which was a 54 foot steel boat, whale back design. Fairly, at that time it was six or eight years old. It had been used as a dragger for shrimp and fish out of Ventura, that area but it had been sitting idle for a couple of years. The guy who owned it was not really a fisherman. But he had built it as an investment I guess and he had somebody running it for a while and it hadn't really worked out. So I went up and looked at the boat and I liked it and ended up buying it. It needed a fair amount of work. It had been kind of run down, taking all the drag gear off it and painted it. By the time I got the thing sorted and ready to fish I was completely out of money, of course. And that was it 84 I guess, in the spring. Then some albacore showed up really early that year off of Baja. So before the boat was even really fully ready to go we took off and went albacore fishing and made a pretty good albacore trip that really saved me because I was really stretched financially on that deal. But right away made a good albacore trip. I think we fished albacore for a while with a good swordfish season after that. And then we would start, we would normally fish albacore through December up until the end of August. And then we would switch over to the swordfish nets in the end of August. It seemed like the swordfish would show up when the water started to cool off at the end of the summer, was when the swordfish would really show up. So by the end we were fishing most of the season off central California. We would fish from Point Conception up to San Francisco, which turned out to be a really good, the most productive swordfish area. The fish were bigger up there and there was more of them. The fish of San Diego there was always a lot of swordfish off San Diego, too, but they were generally smaller fish. There was a lot more competition, more boats, smaller area. There was always problems with fish and game was always looking over your shoulder. Problems with Marlin by catch and sport fishermen all hated you and all that kind of stuff. But Central California was pretty wide-open and bigger fish to. But the weather was worse up there. With the small boats that we had it was dangerous to go up there. So I felt a lot better in the Cloud Nine. Whereas I was regularly terrified in the Kitty Lee I was only occasionally terrified in the Cloud Nine. I did well in that fishery with the Cloud Nine. That was probably some of the easiest and most lucrative fishing in my career was fishing swordfish in the cloud nine. I had a good crew.

>> With that in the late 80s?

>> Late 80s. Yeah. Mid to late 80s. I had a good crew and you could fish swordfish with a two-man crew, myself and one guy. And you know, make pretty good catches. The price on swordfish in those days was still pretty good. Occasionally it would drop due to market problems. Thanksgiving was the worst because it was the time of the year when the fishing was the best and then nobody wants to buy fish at Thanksgiving. Everybody wants Turkey. So it was, we would always get really bad prices at Thanksgiving. But other than that, it was a pretty good fishery. That fishery always had by catch problems. Gill nets are really good at catching everything. It always troubled me some of the things we were catching. But I had learned my lesson with my rock cod experience. You know, I knew that there were going to be problems with the by catch issues.

>> What were the by catch that troubled you?

>> Marine mammals. Primarily. You know...

>> What species were you getting?

>> Pretty much all of them.

>> Some of them didn't seem to bother anybody, like sea lions we caught a fair amount of sea lions and nobody really cared. In fact, funny, I was fishing off Anacapa in the Kitty Lee pretty early on the fish and game department decided they were going to put observers on the gillnet boats to see what we were doing and they pulled up to me one morning when I was just starting to haul my net and they put this guy in the boat and it was Doyle Hannan.

>> I know Doyle.

>> You know Doyle? He's still around. I still see him every once in a while. So they put Doyle on my boat to watch me pull the net and sure enough I catch this damn sea lion and I'm like oh, geez. You know.

>> They were Zolophus, they weren't stellar sea lions.

>> No, they were California sea lions. So I was pretty nervous about that but Doyle says, it's just a sea lion. I just saw Doyle, I think it was last year we were at a meeting together and I told him about that. He'd been the first observer that was ever on my boat and how he'd see me catch my sea lion and he said you know that was the first boat I ever went on as an observer. He remembered it. But yeah. They were instituting, they were instituting the observer program. Which was eventually, I decided to get out of that fishery because I figured its days were numbered. I just couldn't, we tried different ways to try and reduce the by catch, you know. We'd sink the nets deeper.

>> Did you get many leatherback turtles?

>> That happened, too, yeah. We had caught leatherback turtles. Not a lot in California. But one year we went up off of Oregon. We went and finished off the Columbia River for thresher sharks. Which turned out there's quite a few thresher sharks up there at the Columbia River but there was a lot of leatherback turtles. We really caught them up there. That was bothersome. I quit going up there. In fact, pretty much everybody did. But you'd occasionally catch a leatherback turtles. You'd catch marine mammals pretty regularly. Early on some gray whales were caught and of course that made a huge stink, but they were pretty well able to eliminate that by just not fishing close to shore when the whales were migrating. Just moved offshore little bit and avoided the gray whales. But they were always other whales.

>> Beaked whales

>> Beaked whales were commonly caught, not that it was common but you would catch them. There didn't seem to be any way to avoid it, you know? You couldn't see the whale before you set and avoid it or anything. Once in a while you would catch a big whale and it would really be problematic. Most of them would go through the nets. Especially the real big ones when blue whales were around you'd just get these giant holes in the net and that was all you could see. You know. But I know the way the political climate was that that was going to change.

>> Most important part of the story I think. It's not a secret. It's not a secret but, whatever

>> At the time I thought beaked whales were really rare until it was upset that the big whales you guys

were catching but I think there's a lot of them [inaudible] are you okay?

>> This seems like it was recording.

>> We will go back to the by catch.

>> Yeah and they did eventually come up with some things like they put the pingers on the nets and it was after I quit fishing but then they were pretty effective. They really cut down the by catch of marine mammals at least. The sea turtles ended up being the bigger problem. But that was sort of really, that was sort of the end of my career as a local fishermen in Southern California near shore fisheries.

>> Mid-eighties?

>> The late 80s. I think 89 was the last year I fished.

>> You retired?

>> No, I decided to build a bigger boat. And moved to offshore fisheries. So at the end of, it was, I guess, 90? No, I fished 90, 1990 was the last year I finished the Cloud Nine. Then I sold it and built the [Janathina] which I never finished off Southern California. Rarely. Even off Northern California. South Pacific and Hawaii. It's been, that boat's been in Hawaii for the last 12 years. So.

>> So you moved your whole operation to Hawaii basically?

>> Yeah.

>> And what were you catching there?

>> We started out long lining swordfish because I knew swordfish, but only did that for a while. I did a lot of albacore trolling. With that boat. And then long lined some albacore and currently mostly what we've been doing is long lining for bigeye, is what the boat's doing right now. But to get back to the local fishery and sort of the demise. That, the swordfish gillnet fishery was really sustained the local fishery when a lot of the other fisheries were just really failing, like the bottom fish, rock cod and sea bass. In 1990, the gillnet ban was passed by a ballot initiative which made it illegal to gillnet, which wiped out the nearshore gill nets, the guys that were catching sea bass and sharks. The nearshore fish, the halibut. There's a little bit of halibut fishing still going on outside of three miles. But, that really was the end of the real small boat inshore kind of fisheries. But a lot of those guys had put swordfish nets on even small boats in those days which ended up being really dangerous. In fact there was one of them, a small boat that a guy had put a swordfish gillnet on that rolled over inside San Diego Bay and the guy died. He was rolled over by a boat wake, which shows you how unstable those were and the guy died, yeah. It was one of those old Italian fishermen.

>> You want, I don't know exactly where to go because, you know, we could follow you out into the South Pacific, or do you just want to talk about the resource base?

>> You know, the story the impression that I get is what you really want here is a story about the local fisheries.

>> Pretty much, I think. But are you one of the only ones that did some of the local fishermen then go

to the South Pacific at the time the tuna fishermen were having problems with [inaudible]

>> Yeah, I mean the tuna fishery is a whole separate story. The tuna fishery in San Diego.

>> And that you guys were based more, actually trolling.

>> The dolphin, the tuna dolphin thing never affected me personally, or the guys that I worked with. You know, their families, they all had relatives in that fishery. And well, it did affect us in the end, though. This gets back to the idea of sustainability because at that time in the 70s and 80s San Diego was a huge fishing town. Running a fishing boat out of San Diego, if you needed a part for the boat there were two or three places in San Diego you could get anything you needed for a boat.

>> The Kettenburg?

>> No, the Kettenburg, they were more yacht and sports oriented. They had stuff but they were more like San Diego Marine hardware, Harbor Marine, there were two I cannot remember the name, but San Diego Marine hardware and another big one that were specifically commercial fishing supplies that you could get a net, buoys and whatever, you know. Now there's nowhere in San Diego to get commercial fishing supplies. Even rain boots and slickers. Those simple things you cannot get in San Diego anymore. Things like ice for icing fish. I don't think there's a ice dock in San Diego anymore. Fuel. There is no commercial fuel docks in San Diego anymore. You have to go to the yacht fuel dock on Harbor Island. I think that's the only fuel dock left in San Diego. They've never allowed fueling directly off of fuel trucks which is what we do in Hawaii. There's no fuel docks in Hawaii either, I don't know why but they just drive the fuel truck right out on a dock and fuel the boat. But they'd never allow that in San Diego.

>> Why not?

>> I don't know why not. Especially when all the fuel docks went out of business you'd think they would come up with something but they never did. So they did make it, the fact that the bigger fisheries disappeared did make it more difficult for the smaller local guys.

>> So the loss of the tuna fleet in San Diego may have affected some of the local gill netters but the gill netters were affected by the gillnet ban. So they were, then there weren't that many of them were they?

>> There were, there were not that many of them, no. And originally the guys that fished gillnets, the bigger boats, the more serious ones were the ones that had Mexican permits and they fished the white Sea bass fishery.

>> And they were officially.

>> In Mexico there are probably half a dozen of those boats in San Diego

>> Yes we are talking about six boats roughly.

>> Yeah and that are probably small local gillnet guys they were probably, they were maybe another half a dozen. That fished the local kelp beds and stuff guys like Whitey. There was another guy named, we called him Ronnie rock cod.

>> Do want to want to maybe think about talk about maybe the resource base and the sustainability?

>> Yeah because that is half the story.

>> Yeah.

>> And, I think you can't talk about the resource and what happened to the resource without talking about management. And I came to, right away I figured out that you needed management in a fishery. They're some of the old Italians, when I started fishing there were guys that were just adamant that we didn't need any scientist telling us about the ocean. We knew all about it and the ocean was huge and you couldn't possibly over fish it and it was all a bunch of baloney. Well, you know, I never believed that. And I don't think, very few even fishermen do anymore. It became obvious that you need good management. California Fish and game Department has been terrible at management. And the federal government hasn't been much better. And like my early experience when I started hand lining for the rockfish and saw that the resource was being wiped out by the gill nets and fish and game never did anything about it, and then when it becomes a crisis, then they go completely overboard. Now you can't catch any rockfish anywhere and there's a huge resource out there now. There's probably, I'm sure there's more rockfish off San Diego right now than there was when I started fishing but you cannot go catch them. It's illegal to go catch them. You can't buy a locally caught rockfish anymore in Southern California. It's totally tied up by these regulations. There's no fishermen that are fishing them anymore.

>> The sport fishermen do.

>> The sport fishermen do a little bit but even they are restricted. They can only fish certain, in the water depths where the real concentration of the rockfish are they're not allowed to ever fish. You know, between 80 and 120 fathoms. I haven't kept up with the regulations that much but I don't think they are ever allowed to fish in those depths.

>> They are out there all over the place.

>> I think they can fish inside of 60 fathoms for a few months of the year. I'm not sure what the regulations are. But I know for a fact that there are no commercial fisherman for rockfish in Southern California that amount to anything. You can't buy the stuff in a market anywhere.

>> And you reckon that there's a lot of them there?

>> Oh yeah.

>> But they are at the hundred-fathom mark?

>> Yeah which was always where the biggest concentration of them are. I will tell you a story about my buddy of mine actually in Monterey a fishing family of generations and he wanted to go fish chili peppers. Well, the last stock assessment of chili peppers that they did they said that their stock is at 110% of virgin biomass. So he proposed, he had this method that actually the Vietnamese came up with which is essentially trolling. You put out a big line or a whole bunch of those little feather things on it and you lower it down to the level that the rockfish are and you drag along slowly and they bite on there and it works really good for catching things like chili peppers and he figured he could do it. You wouldn't have to drop things to the bottom so that the species they are worried about like canaries

probably wouldn't get on it and you can catch these chili peppers. So he applied for an exempted or experimental permit to go try this. And, they eventually agreed to let him do it. But in order for him to do it, he had to have an observer on the boat 100% of the time. And since he wanted to do it for quite a bit of the year, he had to pay for the observer. Since the observer had to be available whenever he went fishing he had to pay the observer's full salary. He had to essentially hire an observer full-time so that he could go fishing when he wanted to go fishing and the observer would go with him. He goes, that's ridiculous. I can't pay this guy salary. He's going to be making more than I'm going to be making and he's not, you know, going to produce anything. I just, it's not economically possible. So he didn't do it. So all those chili peppers, it's a great eating fish. I'd love to have some chili peppers to eat, nobody can go fish them because you have to have a full-time observer that you have to pay to sit there and watch you catch chili peppers. And it's not going to happen. So, the resource is out there, but it's codified now in things like the Magnuson act. The way they're written makes it impossible to have sustainable fisheries. Like with specifically the rockfish, you know, I knew quite a bit about, there's these huge closed areas now for, that are designed to build up population of things like cow cod to maximum sustainable yield levels which I think is the definition of the Magnuson act. These things live to be 100 years old. Very unproductive. They only occasionally spawn successfully, evidently. But you cannot fish those area without catching a cow cod. So huge areas of the ocean are closed because you might catch a cow cod. So there's no fisheries because of this cow cod. Well there's areas that are set aside as permanent closures to protect the cow cod, but there's huge other areas that are closed just until the cow cod recovers to maximum sustainable yield levels. Which is never going to happen. The maximum sustainable yield of cow cod is probably zero because they are so unproductive. Then there are several species like that. There's what we used to call a freight train that is (*Sebastes gilli*), which is even rarer. That was always rarer than cow cod and they're talking with guys like, the guys that were doing those underwater camera surveys. They tell them I never saw those, didn't see them at all. The bronze spotted rockfish.

>> [Inaudible] a number of of cow cod?

>> Yeah right, yeah. They have started seeing the bronze spot but this is a really unproductive fish, and yet the whole fisheries management schema is based on those things. And then things like about the yellow eyed rockfish they've actually closed big areas of Southern California to protect the yellow eyed rockfish. I mean, an occasional one might wonder down here but it's not part of their normal range.

>> Yeah, that's crazy.

>> And, but these things are in the federal law. So how are you going to have a sustainable fishery and comply with those federal laws? You're not. And that's not even started to talk about the marine mammal protection act. Which basically says that the goal of fisheries management in the US is to build marine mammal populations to as big as possible. And if fishing interferes with that, fishing has to go. And that's in the law, that's the federal law. So sustainable fisheries are not possible with those kind of laws. And it turns out in most cases no kind of fisheries at all are possible.

>> Do you think the resource bases are...

>> I think the resource base right now is probably as healthy, probably there's more fish off Southern California right now than there was when I started fishing, for sure.

>> Not the white Sea bass, they don't have--

>> There's way more white Sea bass now than there was when I started fishing. It was, I never finished white Sea bass in California. Because it was so, I mean occasionally the guys that did fish them, they'd go days without catching one. Then a few would come through and they'd catch a few and they got a really good price for them. They're low cost operations. But there's way more white Sea bass now than there was then. If you look at divers, it was pretty extraordinary for a diver to spear a white Sea bass in those days.

>> Well maybe, just maybe think back before you started fishing. Because you started in the mid 70s and by that time many of these fish like the old divers talk about just flocks of white Sea bass like a freight train going by. So maybe your baseline is starting at a different place.

>> I think that's true that I started at a time where much of those fish were at a low point. The white Sea bass, black sea bass is another one. They were pretty rare in Southern California in 1973. You know, pretty rare that anybody would catch a black sea bass. They would catch one every once in a while, but they're all over now. Way more black sea bass now than there was then.

>> But there were in the 30s in the 20s, when you had all these...

>> I don't know. I wasn't around then.

>> I know but I'm just trying to focus on the--

>> I wouldn't be surprised if there weren't more black sea bass right now than there was in the 20s because there were hand line fishermen that fished the kelp beds in the 20s.

>> They caught a lot of them.

>> Sure they did. They targeted them. So yeah probably more than there were in the 20s.

>> So why do you think the increase, just bans?

>> If you don't fish something there's going to be a lot of them.

>> How much does climate, just long-term oscillation...

>> That's the other thing. Some of these fish they go up and down for other reasons. Like even like the white Sea bass we've seen here recently, about I don't know, 10 years ago all of a sudden there was jillions of little white Sea bass out here. I'd go diving like at tabletops there were a whole school of them right behind the reef there. There'd be 20 or 30 little white Sea bass right there in the channel behind the reef at tabletops. And I hadn't never seen it like that before and actually have not seen it like that since. In the last few years I don't see it like that. So clearly, those things are not fishery related. Maybe part of it but there's more to it than just the fisheries. You can't explain all those things by the fisheries. That's a big mistake that's been made, too, is that anything, if the population declines everybody assumes it's the fisheries that did it. It is in some cases, but in some cases it isn't. So, I mean if the population decline wasn't caused by fisheries you won't be able to cure it by regulating the fisheries. Other fish, like albacore in Southern California, it's a periodic thing. I think it would be whether it was the fisheries or not. One of my favorite stories, one of the old Italian guys told me his family came over from Sicily in the 1930s sometime and they moved in with some relatives in Little

Italy and they had come over I think in the fall or something. So they were hand lining in the kelp beds, they were fishermen in Sicily and that's the thing they knew how to do. So they were hand lining in the kelp beds probably for black sea bass, whatever they could catch. And even then he said it was a struggle. They weren't making much money. Geez, we came all the way from Sicily for this. They were complaining to their relatives, you know, this isn't very good. The relatives go, don't worry about a thing, you know, in June the albacore show up. We go out there, we fill the boats with albacore. It's easy work, it's a good market for them and everything is going to be great. He said it was something like 15 years before he saw the first albacore. That year they didn't show up and they didn't show up for 15 years and that's happened if you look at the history of albacore in Southern California. That's happened over and over again. There will be a lot of albacore for a few years. Everybody's catching a lot of albacore off Southern California and then they'll disappear completely. Nobody catches a one for years and then they come back. I really don't think it has anything to do with the fisheries. And other, well, like sardines and mackerel, all those things have cycles that may be affected by fisheries, but I'm not sure it's the major effect. So, the current regime we have that has been designed to get rid of fisheries. And there's a huge push to get rid of fisheries. It's been very successful in Southern California. There's a lot of fisheries that would be viable here. But, one of my favorite ones is bigeye tuna. There's a huge market for bigeye tuna in Southern California. They import it from all over the world. There's bigeye tuna right here off Southern California. The only real way to catch bigeye tuna is with a long line. Californians always, for a lot of reasons there's always been an effort to prevent longline fisheries from developing in California. I've thought about it a lot, and part of it I think goes back to, a lot of it's racist. That there's been a huge effort over the whole history of California fisheries management to prevent Asians from catching our fish. And longline fisheries were always done by the Japanese. The Japanese longliners. The local tuna fishermen hated the Japanese longliners. Then the sports fishermen hated the Japanese longliners, for no apparent reason. They don't even fish for the same species of fish. Everybody hated the Japanese longliners. So it's always been illegal to longline in California. So there's never been a fishery developed for bigeye tuna. By the US.

>> California regulator, or federal?

>> Originally it was regulated by the California Fish and Game Department.

>> Even offshore of the California state limit?

>> Right. Eventually they did pass a law, I think it was in the 80s, they passed a law that you could fish outside of the 200 mile limit with gear that was not legal in California. And it was specifically passed for long liners, for guys who wanted to go longline fishing and they were able to get this law through somehow. They never were successful at it, but the law was put in effect. You could fish outside the 200 mile limit with longline gear.

>> So the longline it's sort of basically within the 200 the 12th, but not the 3 miles, there, they are preventing them from fishing everywhere.

>> Everywhere, yeah. People don't realize, but from the tip of Point Loma or if you fish from San Diego you leave from Point Loma when you leave from the tip of Point Loma to the nearest place that's outside the 200 mile limit line is 390 miles from the tip of Point Loma. So back when I, and I actually did longline swordfish out of San Diego for a little while, at that time like I said I had to go a minimum 390 miles before I could put my gear in the water. Longlining is legal in Mexico. It's 14 miles from the tip of Point Loma to the Mexican border. So Mexican longliners could fish 14 miles from Pt Loma and I had to go 390 miles before I could put my gear in the water.

>> In US waters [inaudible]?

>> Yeah. I couldn't fish in Mexican waters in an American boat. And those Mexican fishermen can unload their swordfish in Ensenada and have it at the Chesapeake fish company the same day, which is where I was selling my swordfish.

>> What do you think about the swordfish? You're pretty familiar with them, that population?

>> Their population is in good shape. Well, actually there's a book there that is from a workshop they had a couple years ago. And it shows the population estimates. And that the catch in the North Pacific is a small fraction of the maximum sustainability yield levels. But again, they are an episodic thing. There's things like the 1978 that I told you about where there was a huge catch of swordfish by the harpoon fishery in Southern California. All the conditions were just right. And it's never happened again.

>> That was the end of the regime shift or the beginning of the new regime. And then you start having the El Ninos and [inaudible] warm water here.

>> Yeah. But the gillnet boats did okay during that. Right now, the last couple years here locally I hear it's been terrible for swordfish. Nobody's catching any. And I think it's the water conditions, you know, because the population in the North Pacific is still in good shape. The longline fishery offshore is doing fine. So yeah, swordfish is another one. But now here's another classic one. When they put a federal fisheries management plan on swordfish, on pelagic fish, they pretty much adopted the California Fish and Game regulations and just stuck them into the federal. I sat through the whole process of the development of that fishery management plan, went to all the meetings. Their promise in the beginning was, we're going to make the laws uniform because in Hawaii they've got one set of laws about longlining and on the coast it's a completely different set of rules. We're going to make them uniform. Well that didn't happen. Instead what they did was, on any particular issue they would look at well, what is the Hawaii reg on that and what's the California reg on that, and they took whichever was the most restrictive and put that into plan. There's a lot of things that are perfectly legal in Hawaii, like selling Marlin which is illegal still on the West Coast. And then it was it actually came out even worse than that because at the time they started the plan it was legal to fish for swordfish outside of the 200 mile limit off California. And it ended up being illegal to longline for swordfish off the coast of California if you're based in California. So now, right now, if you want to longline swordfish 200 miles off the coast of California, if you are a resident of anywhere in the world other than California you can go do it. But if you're a resident of California you can't. If you are Korean or a Taiwanese or a Japanese boat you can go out there and longline all you want. But if you are from California, you can't. In fact the majority of the swordfish landed in California is caught by Hawaiian longline boats because they screwed up and left a loophole when they drew up the regulations that they didn't forbid Hawaiian permit boats from landing fish in California. So Hawaiian permitted boats can fish off California and unload their catch in California as long as they work under Hawaiian permit rules. But Californians can't. That's just one of my favorite examples of how screwed up the regulations are. And that was frankly an oversight. If they had been aware of that when they did the regulations there would be no swordfish being landed in California. They would've outlawed that too, if they'd thought of it. With the bigeye tuna thing, this is what eventually you will see with swordfish too, you've already seen it with the bigeye tuna, because they were successful at preventing a fishery from ever being developed for bigeye tuna in California, when international management went in place and when quotas were put in place they are based on catch records. So this is back probably 10 years ago when IATTC started

coming up with the figures for what the quotas were going to be on bigeye tuna. The first proposals were well, how much bigeye tuna was caught out of California? Well basically none. So the first proposal was we are going to get 150 tons a year of bigeye tuna quota. I saw that come out and I called the guy who was the director of the region. And I said look, you know, they put this out and they said well this is not going to affect US fishermen because none of them fish for bigeye tuna anyway. So it's not going to have any effect. But they didn't even bother to look that the Hawaii longline fishery, a significant amount of it had fished inside the 150 line, which is IATTC boundary. So a significant amount of the bigeye tuna being landed in Hawaii was being caught in IATTC area and they hadn't even taken that into consideration when they put the quotas up. So then it was, oh, we didn't realize that. We will go back, so they redid it and they came up with the US got 500 tons of bigeye tuna quota for the Eastern Pacific which is basically the area between California and Hawaii we get 500 tons of quota. The Japanese got 33,000 tons of quota in the same area. The Koreans and Taiwanese got 10,000 tons each. And the US got 500 tons of quota.

>> Who did that?

>> The IATTC. But it's based on catch records. Now we've got swordfish. Okay. The exact same thing is going on. It's illegal to fish, to longline swordfish which turned out to be the only real way to catch them, out of the state of California, or out of the West Coast because now it's a federal plan so you can't do it in Oregon or Washington either. It's illegal to fish for swordfish out of the West Coast. Well, eventually those things are going to put on international quota too and it will be based on international catch records.

>> Just looking at things, we want to make sure we hit before we run out of chips.

>> Go ahead.

>> Maybe we could just go on break for a minute and---

>> I just had a quick question.

>> What?

>> I had a quick question. Early on you were saying how when you are starting you were able to just be sort of opportunistic right, switch catching...

>> That's a really good point. That's the other reason that there aren't any fishermen left anymore. When I started fishing you could basically do anything you wanted. And you know, you could go, jeez, it looks like it's going to be a good lobster season year. I'm going to build lobster traps and put them out. Oh, looks like there's some white Sea bass around. I've got some sea bass nets in the backyard. I'll go put those out. There was a lot of flexibility that you could adapt to the current conditions. Well that's gone. Everybody's compartmentalized now. You've got a lobster permit, you've got to go fish lobsters. Well a bunch of these permits, when they came in you had to fish them or else you would lose the permit. It forced people to go fish, even if the fishing was no good, the population was down, you still had to go fishing. And because you didn't have the permit to go fish for something else that was maybe in good shape, you couldn't do that. Then all of these, if you look back at the traditional fishermen that were in business when I started, they had a cycle during the year. None of them fished the same thing all year round. They all went from one fishery to another during the course of a year. They would fish albacore in the summer. They would fish maybe sea bass in the winter or they would fish lobster, or

they would harpoon swordfish part of the year. There was a whole bunch of fisheries, they would gillnet for barracuda. There was a whole bunch of fisheries that these guys would do if it looked good. It's this time of the year for this or that. They had flexibility and they don't have that anymore.

>> What do you think the main limits are now to one operation or one person just getting a bunch of permits. To do the...

>> Well, things like, I'm not sure. I haven't kept up on it that much. A lot of it's just money. A lot of permits cost money. A lot of them are transferable now at least. But you have to have a bunch of money. They're expensive. So it's not to where you would buy a bunch of these permits and then not use them. Like a lobster permit. I don't know what they are worth, but I'm sure they are worth a fair amount of money. So you're not going to buy one just in case a lobster fishing looks good one-year. If you're going to invest that much money you're going to go fish lobsters. Some of the other things, like that gillnet permits were, they were designed so that they would eventually all go away. Is that you could only get a gillnet permit when they gave them out you could only get one if you had gillnet landings, if you'd been fishing a gillnet. And then even when they made them transferable you had to show that you had experience in the gillnet fishery. You had worked as a crewman or something like that. You couldn't just out of the blue decide to go get a gillnet permit. Swordfish fisheries, I don't know, it's been so long since I've been in all this, the swordfish drift net fishery for instance. Those permits were transferable. I'm not sure if they had a use it or lose it clause on those. But again if you had to pay a bunch of money for the permit, you'd want to use it. If you weren't sure you're going to use it, you wouldn't go but it. You know?

>> So it's sort of forces the small scale fishermen into being specialized?

>> Yeah and sort of like the rock cod fishery. That was always sort of the last resort. If there was nothing else you could always go fish rockfish. And a lot of guys would do that to fill in during the winter. Go make a few rockfish trips. Go out to the Cortes Bank or something, hand line for rock cod, make a few bucks in the wintertime. Can't do that anymore. Even though the fish are there. The markets here.

>> That seems the more sensible way.

>> Yeah, yeah. But all of these regulations they were put in, they never considered the economic sustainability of the fisheries when they do these regulations. They were never a consideration in any of it. Much less in the overall picture. Even if they had looked at it when they put, limited entry permits on this fishery or that fishery, it wasn't even a consideration, much less look at the big picture and say jeez, if we force everybody into these compartments they're all going to go out of business. Which is sort of what happened. But, and I don't know, and the other thing, in San Diego at least, there is a lot of pressure from the sports, you've got this huge sportfishing fleet that puts huge pressure on the nearshore resources. Commercial fishermen are directly in competition with that. There is no way around that. The sport fishermen always, "we just go out there with a rod and reel and just one hook on the end of the line" and yeah, you go out, yeah, there's 15 boats full of them every day of the year, with 40 guys with little hooks on the end of their rods and reels. It's a huge amount of pressure on the nearshore resources.

>> That was the only other thing that I thought of to talk about, was the relationship between the sports fishermen, coastal sports fishermen and commercial guys. I think we are still looking at a fairly focused fishery though with the sports fishermen. They're bottom fishing off Point Loma and coastal pelagic off

La Jolla. But there's not a lot of variation in what they're taking.

>> Yeah, but I mean they're definitely targeting things like white sea bass, halibut.

>> More kelp bass, I think.

>> Yeah, but what they're getting if there are white sea bass around they're definitely going to go for it. And they certainly are going to oppose anything that would increase the commercial take of white sea bass. They've always prevented kelp bass and sand bass have been illegal to catch commercially since way way before I started fishing. I don't know, the last there were like, remember Tony and Joe they had old Monterey's, used a long line for sculpins, they did that for years. They just passed away. Here five or six years ago. That was a real artisanal fishery. They use the original baskets that they got brought from Sicily like these wicker baskets, and they would arrange their hooks in these things and bait the hooks and set them on the bottom, they targeted sculpins and they would sell them all to the Anthony's restaurant chain.

>> That's the basket for the---

>> Yeah, it was a real traditional thing and of course nobody's going to do that anymore. [Inaudible]. But, the other thing I did want to talk about was that, you know, the safety, the history of disasters in the fishing industry that are part of the story, too. Which, I started talking about that a little bit talking about the old wooden boats that we started out in that swordfish fishery and how many of those, I think pretty much eventually every one of them sank. And there was a lot of guys lost their lives in those things. It was never really talked about. Certainly not in any kind of fisheries management thing. It was never a consideration when they start like, closing areas and pushing the fishermen further offshore. I've heard just proposals, just outrageous proposals being put forth in some of these meetings. Oh, yeah you can do that but you've got to do it 50 miles off the coast of central California only during the middle of the winter. You know? And it's never been safety of the fishermen has never been a consideration in fisheries management things. And even, it just constantly irritates me, even the things I've been involved in more recently in the longline fishery in Hawaii where the main concerns are by catch. They have observers, they have full-time observers on the swordfish longliners now, 100% observer coverage. Any interaction with, any kind of anything is recorded. But injuries to fishermen are not recorded. Even though there's mandated, there are gear mandate things that are potentially dangerous to the fishermen that are mandated by these by catch regulations but there's no records kept of injuries to the fishermen. Or even deaths, to that matter, to the fishermen that might be caused by these same regulations. And part of you know a lot of it is fishermen will do stupid things on their own, dangerous things. Because of the money partly and there's some machismo involved, too, and a lot of it is just ignorance. Things like vessel stability, which it's a little bit complicated. Well, sure you can put a gillnet reel on that boat in the harbor and fill it with net and the boat will still float. But is it really going to float upright if you get into heavy seas with that thing. Clearly a lot of them were just unstable. There were never any mandated stability requirements for those boats which would have been resisted by the industry.

>> That's what I was going to say. If you were, it sounds like you are talking about management mandating some safety issues, some sort of awareness and things.

>> Which has happened separately. The Coast Guard has implemented a bunch of safety regulations. I think when we started out there weren't requirements. You didn't have to have a life raft. Much of those regulations have gone into effect and more and more they're going in, but from a completely different

branch of the government. That's all coming down from the Coast Guard and there is no communication between fisheries management and Coast Guard management and they're occasionally, I think there is some language in the Magnuson Act in some places in the management laws that safety at sea is a consideration but I've sat through literally months and months worth of meetings about these things and I've never heard anybody talk about it.

>> I haven't either, and I think though that you've got different experts. Here you have fishing experts and I think that they are relying on the Coast Guard for enforcing safety.

>> Yeah, but the Coast Guard looks like vessel stability. A little bit. They haven't even done that very much. But they look at equipment, the liferafts and lifejackets and--

>> They don't give you...

>> They don't look at the fishing gear at all, they don't look at the safety of the fishing gear.

>> Do they give you any regulations or any training on just how to drive a boat? Trial and error until you tip over.

>> No, that's a good point. No. And frankly the only reason I'm still here is luck. Because when I started out I didn't know what I was doing.

>> That's one of the things I wanted to ask because I think third and fourth generation fishermen, their parents have taught them a fair amount how to drive the boat in heavy weather.

>> You know, you would think that but some of the guys that did things, you know, that lost their lives were third and fourth-generation fisherman that did stupid things.

>> They did stupid things.

>> So. Yeah, no.

>> Okay.

>> But it would be great to have some, somebody looking at that. You know.

>> I've never heard anybody in any meetings worrying about it. But the Coast Guard's is never at any of the meetings and yet you have some famous stories of like the perfect storm.

>> The perfect storm, that's, there was that one on the East Coast. There was a perfect storm in San Diego in 1987.

>> '88.

>> Was it 88? It was in January 88, yeah. Because, which you don't hear much about, but there were five swordfish boats were lost in one night, right off San Diego in that storm. And it was, you know a bunch of them were those small boats, the Kitty Lee that I used to own was lost that night. The guy just disappeared. So...

>> Interesting that, I was making a big to ado about my kelp bed disappearing. But I didn't even know that the fishermen were disappearing.

>> Yeah and that was just one in a long string. You know, those guys in those picture albums, guys that were, at the time I started fishing there were quite a few guys my age that were getting into fishing in San Diego, sort of my cohort and I can't think of any of them that are still alive. They were all lost at sea.

>> Most of them died at sea?

>> And you know the only reason that I wasn't was luck, a lot of it. But I was kind of chicken, too. All those guys were tougher than me. They would stay out times when I wouldn't

>> Might talk about [inaudible].

>> And I would do things, and I did realize fairly early on as it was, I remember doing things that I never saw anybody else do. Like one time I got caught outside of San Nicholas Island in the Kitty Lee with a swordfish net, the wind came up during the night. So in the morning it was blowing, 35, big seas we pulled the net back and pulled like most of the net back onto the reel, then I cut the net and I put all the net down into the fish hold and I emptied the reel in the fish hold to get the weight down. Nobody else ever did that. Because I knew I had to run down the swell from there to get in. But you know guys didn't think to do that. Just pull the net and we will run in, you know. In 85...

>> It's a macho thing to some extent?

>> It's a macho thing, but it's sort of an obvious thing. Like running down swell is the most comfortable thing to do in rough weather and if you're getting closer to port by running down swell it's obviously, run up the gear and run down swell. In 85 there was, I told you they had that regulation that you had to have, you had to catch as much thresher shark as swordfish for it to be considered by catch. Well in 85, the swordfishing was pretty good. And I caught, I hadn't caught that much thresher shark, so ended up going over my limit and I think at the end of November I had more swordfish than thresher shark. So, they took my permit for a month. They said oh, you cannot fish for the month of December because you caught too much swordfish and I knew it was going to happen. I thought it's worth it. I'm making enough money off the swordfish. I'll take a month off. So I stayed home that month but the rest of my code boats, my code boat stayed fishing and there was a good run of swordfish up outside of San Miguel Island. They were all up there and they got caught. A storm came up. The whole fleet was out there. They all pulled their gear and they started running in and I'm not sure how many boats were there. Maybe there might've been 15 boats there. Well, three of them rolled over and sank. And...

>> Is that three out of 15? I couldn't...

>> Sorry.

>> It was just, I lost a really good friend and I had to tell his wife.

>> That was three out of 15?

>> I'm not sure.

>> I couldn't tell if it was 15 or 50.

>> No, 15.

>> I had no idea it was so...

>> This actually is probably a pretty good place, we've covered enough by your formula, but everything that's in there has been covered really well.

>> Like I said that was more of the background mental framework--

>> I was going to try to get some more things on the invertebrates on 9 mile bank and you know, but that's not really part of our mission. I could do that on my own. You know, your shell fishery, and you are getting into your plants because you are actually somewhat different from most of the fisherman that I know.

>> Well, that, you know that was my real motivation with getting into fishing is that I always just really liked messing around in the ocean to see what was there. And working with, like I told you I got stuck in the chemistry lab for the fisheries that wasn't what I wanted to do. I thought by going fishing I kind of got back to doing what I really liked which was messing around in the ocean. And it worked out over the long run. It worked out well. I got to mess around in the ocean a lot.

>> It seems like you grew up outdoors, too. Your father, you were living in the Sierra's and fishing in the mountains, which is part of my own story. We fish to live, trout fished. Up in Oregon. I think there is something to that outdoors people have a sensitivity to nature and a curiosity.

>> You know, it's funny. In the fisherman there's a lot of motivations in people that fish over the years the guys I have known fishing. They don't all do it for the same reason. There are some of them that just love to fish. They love to catch fish. You know, and they will go catch fish, I mean, even if they are not getting paid for it they will still go catch fish. There are other guys that just do it for the money. It's strictly a business to them. They figure that that's their whole rationale. I'm going to go do this and this and this because that's the way I make the most money and the other guys that do it just because they love to fish, well they will base their decision on how can I catch the most fish? It won't necessarily be how they're going to make the most money. And I was kind of a mix of, you know, I did it based on geez, that would be fun. Or gee it would be really interesting to go do this, but it was tempered by my early experience if I just do exactly what I think is the most interesting I'm going to go broke. So, I always looked at well is there something interesting that I could do to where I could probably also make money? So that's sort of the way I decided.

>> But still when I first met you guys, you know, and this isn't part of the record, but you know, you were really into the plants, the native plants. Was that more Linda?

>> Actually that was Linda, yeah. She was more into it.

>> Okay, okay. I just didn't know you very well, but knew that you sort of as somebody who really knew the native plants and it's a lot of surprising that a lot of the old, not new, old oceanographers the same way. John McGowan for example, is a hell of a naturalist [inaudible]

[Both speaking]

>> These guys that are my age and older were inevitably naturalists to start with.

>> I have a good story for you from the Baja expedition. They are looking at old records of plant collections and in this area where we were there was this Rancho Las Cruces on the coast down there and there was a record there of Carl [Hubs] collected some plants there in 1962, I think it was.

>> Okay.

>> And then they look back at this record and they said, oh, there's something wrong with this record though, because on the exact same date that Carl Hubs made this record of plants at Las Cruces there was a record of Carl Hubs collecting some plants that Guerro Negro, which is 500 miles away. They were saying there's something wrong with this record. It can't be right. I said well, there is an airstrip Las Cruces. There is an airstrip at Guerro Negro. In those days, pretty much airplanes were about the only way you could get around in Baja. So it's not inconceivable that Carl Hubs collected some plants that Guerro Negro. And then flew to Las Cruces and collected some more--

>> I don't know how anal he was about writing his data down for plants, but that's correct. I hadn't thought of that but Perry Mason had his helicopters all through the cave country in the 60s, early 60s. Carl was good friends with the pilots of one of those small airlines, Jims Air, perhaps. But, Carl was all over Baja in those days he was doing his temperature runs every month, recording and defining the upwelling points. But actually That was all done by his truck.

>> Really? Wow.

>> Some of the people when I came, that's how they got their start for Scripps, was doing temperature runs for Carl.

>> Really?

>> You know, Stover, Al Stover.

>> Yeah, I remember him.

>> Those guys were all out doors men.

>> Yeah

>> You don't see that anymore.

>> Right.

>> I don't know if that has something to do with the changing of the business as well.

>> Oh, yeah. You know, I wanted, I mentioned when you sent that framework for the questions out, I mentioned the fact that if you want to talk about why young people aren't going into fishing, it's really, there's social changes and that's what you are talking about. Kids used to spend a lot of time outdoors and really were interested in the outdoors and I think that's where a lot of us came from and ended up fishing. We were always poking around trying to find snakes or fish or something, you know. We had

an interest in the outdoors and I really don't see that in young people now, which is one part of the social thing. But the other part of the social thing, that will probably prevent those kind of fisheries sort of subsistence low level local fishing from ever developing again, is the change in the economy. You couldn't support that Southern California coastal lifestyle with that kind of fishing operation anymore. Whereas, I sort of could. You know, when I could buy a house in Solana Beach for \$22,500. Then I could get a small boat and go out and make the house payments, you know. Well, there's no way you could do that now. And not only could you not do it, but I don't think, you know, young people now wouldn't be satisfied with the kind of lifestyle that we were satisfied with in those days. So it's just, it's a social change. It would just preclude it from developing. The only way I could see it happening is if you developed, which is not out of the questions would be like the slow movement, slow food movement kind of thing. If people got to value that local fish as highly as they do say, in Hawaii, where you still can do that kind of thing in Hawaii. There are some guys with pretty small boats over there that do okay because they are able to sell their fish for really high prices and people are willing to pay top dollar for a really good, fresh locally caught fish. And I don't see that here. Well, and even if, and I see it not being able to develop just because there is no supply. That's the other part of the thing that's never been taken into consideration and I see it constantly. I just saw something today or yesterday on the e-mail somebody was saying oh, this is some fisheries manager says this is so drastic, we should just stop all fishing for a year. Whatever fishery it was. Well you can't do that in a business. You can't say well we will just go out of business for year. You know? You don't go out of business for year, you go out of business forever.

>> It's a mentality that comes with sports fishermen that are, that don't, that has no economic feedback. They're rich to start with if they have a boat to go out there.

>> Yeah.

>> So they don't need to care about sustainability of their resources or that sort of thing. And they don't.

>> So that's never been really a consideration. And if fishermen whine about it, they say, oh that's just the fishermen. They're just greedy. And, but we have seen that it's worse than even going out of business for a year because if there's interruption in the supply, the buyers or the--

>> The market--

>> The market finds a substitute.

>> The market goes.

>> If you come back a year later and say, and this has happened over and over again in fisheries, like a classic one up in northern California was barracuda. It used to be a big local deal. These guys would gillnet barracuda. I think you can troll for them. There was a big market for barracuda. And then the barracuda disappeared, whether it was water conditions overfishing or whatever, they didn't catch any barracuda for a long time. Well, then the barracuda came back. And the guys would go out and catch them and the market said nobody eats those things, we don't want them.

>> We're going to need to, I have to get back to work because I have people coming to see me. So, but we should--

>> Any final thoughts?

>> Think about where to go next with John. I think he's probably our best mentor in this project. And Pete will give you pretty much the same message, I predict.

>> Pete, yeah, Pete will be interesting because of course he is a local fishery that is sort of sustainable

>> He is working hard to keep it going.

>> Yeah. Yeah.

>> He does, and--

>> Of course he's doomed in the long run too. As soon as the sea otters move back into Southern California, that's all over.

>> That's another, let's not get into it.

>> Kind of a Sus Kato, imagine how that goes over with my friends.

>> I worked for Sus Kato, and he's kind of worked it out like what could be the sustainable, the value of sustainable yield of sea otter pelts. Turned out it could be quite lucrative, you know.

>> Pretty interesting in Alaska because the Tlingit natives of Sitka take tour boats out to look at sea otter. And the Haida from Craig will follow the tour boats and blow the otters away in front of the tourists.

>> Good. Well there's a lot of people up there are realizing that they're losing some of their fisheries to the sea otters.

>> I think everybody understands that except, well even probably the otter lovers understand that, but they don't care. You know, that's actually interesting because I'm pretty green, but that is where I had my biggest fights in the Marine mammal world. Were over sea otters and they are wiping out all the coastal fisheries. It's not just urchins, it's crabs, too.

>> Pismo clams.

>> It's just about everything. And I think, I don't think people really care about keeping a fishing culture going. And these are the people with the wealth and it's been frustrating for me. And they hate me. The fishermen hate me, everybody hates me.

[Laughter]

>> I don't. Thank you.