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Morgan Averill Gray
Bard College

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"**PCB Pandemic":** How Polychlorinated Biphenyls Plagued the Hudson And Why Commercial Fishermen Were Left Behind

Senior Project Submitted to

The Division of Environmental and Urban Studies

Of Bard College

by

Morgan Averill Gray

Annandale-on-Hudson, New York

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Introduction

Close your eyes. You're sitting at Memorial Park in Nyack, New York, right on the Hudson River. It's a Saturday afternoon, the end of May. The year is 1971. The air is crisp and cool but warm enough to be comfortable in shorts and a light sweater. The trees around you are budding, birds are singing. The water is calm, barely any wind. There are a few boats in the distance. A sailboat with two children sitting in the bow. Their parents at the helm. They live in New York City, but they make the 45-minute drive to come take the boat out with their kids so they can escape the city life and experience nature. The parents do it because they know it's good for their hearts and their souls. Nature, the river, can teach their children unspoken lessons no classroom ever could. By escaping the concrete jungle and appreciating the natural beauty of the river, their children can experience a stillness, a feeling of connection, of love and respect for the natural world that they otherwise would not if they grew up solely in the city.

You look to the left, where there are two more motorboats. There are three men on one boat and two on the other, all pulling fish from two large nets. They are both white stern trawlers. Two middle aged men and a young boy are standing in one boat, one middle aged and one older in the other. All of them are wearing bright yellow waders and navy-blue bucket hats, even the little boy. He is with his dad and his uncle on their family's boat. Next to them stands his dad's friend and his father on their family boat. Commercial fishing has been in both of their families for generations. It has been passed down from father to son and the youngest boy is out today learning how to cast and pull the nets, what times are best to go out, and all the tricks his family learned over generations. They are fishing for Shad, which are abundant this time of year. Early spring is when they move upriver by the thousands to spawn. It is a short season for Shad.

They come around in early April and are all but gone by June. So, April is prime time for fishermen to net-catch enough fish to make a half decent profit. Their options are limited now. Since 1975, the presence of high levels of manmade, highly toxic industrial compounds called polychlorinated biphenyls (PCBs) in the fish has led New York State officials to close various recreational and commercial fisheries and to issue advisories restricting the consumption of fish taken from the Hudson. Striped Bass, which used to be profitable for them, cannot be sold commercially anymore. Since Shad are in the river for less time, their PCB levels are considered acceptable for consumption, but the profit made off them is not enough to survive. Fishing has never been the same since the Department of Environmental Conservation put their regulations in place. This young boy is learning the ropes, but his father and his uncle fear for the stability of his future if he were to make this his livelihood. It is hard for them to explain to their young boy that not everyone appreciates and respects the river the way fishermen do.

Fishing is arguably the most intimate experience a person can have with the river. It provides a calming and connected experience with nature, and for generations of people, it provided a living as well . These fishermen grew up on its shores, woke up in the early hours of the morning and caught the fish that allowed them to feed their families. They knew the river better than any scientist or politician. They had this deep-rooted respect and understanding that though it willingly gave them things, it could just as easily take them away. "During the hard times, the Hudson River was an economic safety net that lent needed work, and a ready food supply." In the colonial period, early settlers feasted on oysters from the river. Atlantic Sturgeon were once referred to as the "Albany Beef", a profitable dish in New York's capital. It was far

more than a body of water or a dumping ground for these families. It was not only their income, but their passion. A lifelong commercial fisherman, Bobby Gabrielson says it best when he said, "It's embedded in the family, my great grandfather, my father, myself, my sons, my grandsons, we've always been… and there's no other place that anyone should ever want to be than right here on the Hudson River and fishing, whether it's sport or commercial, there's nothing better than being on this piece of water."

Now, the year is 2020. Donald J. Trump is the 45th president of the United States. On January 7th, the World Health Organization was made aware of the novel coronavirus, then known as 2019-nCoV, in China. On January 11th, China recorded its first coronavirus death. On January 16th, Donald J. Trump's impeachment trial began. On January 20th, the first US coronavirus case was reported in Washington state. On January 23rd, Wuhan, the epicenter of the coronavirus, went under an unprecedented lockdown which affected over 11 million people. On February 4th, the Iowa caucus results were delayed due to "quality control". On February 5th, Donald J. Trump was acquitted by the Senate on both articles of impeachment. On February 11th, the WHO named the coronavirus disease COVID-19. On March 10th, Italy became the first country to implement a nationwide lockdown due to COVID-19. On March 11th, the WHO declared COVID-19 a pandemic after spreading to more than 100 countries around the world. On March 13th, Donald J. Trump declared a national emergency amid the coronavirus, which triggered the Stafford Act, allowing states to receive $50 billion in federal aid. On March 16th, the Dow plunged 2,997 points in the worst drop since 1987 amid coronavirus fears. On April 2nd, global coronavirus cases exceeded one million. On April 8th, Senator Bernie Sanders dropped out of the 2020 presidential race, making former Vice President Joe Biden the presumptive Democratic nominee in the race against Donald Trump. On April 9th, the state of

New York alone had a higher number of coronavirus cases than any country in the world. On May 25th, George Floyd was killed by a Minneapolis police officer who used his knee to pin Floyd's neck to the ground. This murder of a Black man by the hands of a white officer was "the straw that broke the camel's back.". Protests against police brutality and racism ignited across the United States, and eventually, all over the world.

As you can see, 2020 has been quite a year. One that has resulted in loss of all kinds for billions of people all over the world. People have lost jobs, lost loved ones, lost opportunities, lost experiences and the chance for once in a lifetime events . . . they have lost hope. Yet despite a level of devastation in the world that this generation has never experienced before, we can, at the very least, find solace in knowing that no one is exempt. We are all in it together. We know that we are not the only ones, not even one of a few, that have lost something. There is comfort in the familiarity of our plight. This time has really made me think about the many times throughout history that individual people, or certain groups of people have experienced a "pandemic", all on their own.

The word "pandemic" is usually directly associated with a disease of some kind. Although the word itself comes from the Greek word *pándēmos,* "pan" meaning "all", and "demos" meaning "the people". The word itself doesn't inherently mean disease. Although the word disease broadly refers to any harmful, depraved, or morbid condition. So, you could say that Black people suffered, and are largely still suffering a pandemic if we name the disease slavery and racism. If we call the disease climate change, Bumblebees, Whales, Asian Elephants, and Coral Reefs are experiencing a pandemic. Say technology is the disease, textile workers, elevator operators, and booksellers have experienced a pandemic… It happens often, certain

industries, businesses, or groups of people are threatened by diseases like poisoned minds and corrupt systems of government, advancing technologies, changing consumer interests, or deteriorating natural environments. The difference is that all of the people who aren't directly affected can go about their lives as if the tragedy isn't taking place. So, what is it like to experience pandemic level loss, have your livelihood taken away and feel crippling uncertainty… virtually all on your own, as the world moves on as normal around you? I can only imagine it would be isolating, terrifying, and completely heartbreaking, to say the least.

A pandemic that many people have never known is the disease of PCBs on the Hudson River. The once prosperous river brought to its knees by big corporation's irresponsible use of deadly chemicals. The pollution not only deteriorated the river but took the livelihoods away from men descending from generations of loyal, dedicated fishermen. They lost everything while others sat by and watched, even profited. This loss, fear, and uncertainty can certainly create distrust and skepticism among those affected. We see it now with COVID-19, 25% of American adults see truth in the well known conspiracy theory that the Coronavirus was intentionally planned by powerful people. Many also believe that most lockdown guidelines have been implemented by Democratic leaders in order to strip American citizens of their rights. It is easy to slip into the victim mentality, and when you view the world that way, imaginations can run wild. People lack trust and faith in the government when the regulations negatively impact their livelihoods. In this case, the global COVID-19 pandemic created similar feelings to those that commercial fishermen felt when the New York DEC implemented fishing bans as a result of the PCB pandemic among the fish of the Hudson River.

So here we are. The year is 2020 and I am sitting on a park bench in Memorial Park in Nyack, New York. It is a Sunday afternoon in early fall. The air is crisp and cool, but I'm still comfortable in my shorts and a sweater. The trees are half green, half yellowy orange. Most of the leaves are still hanging, although in the early stages of decay. We are in the midst of a global pandemic. No one is within six feet of me, enjoying the sight of the Hudson River. I look out to my right at the newly constructed Governor Mario M. Cuomo Bridge, where the landmark Tappan Zee Bridge once stood for 65 years. In front of me is a barge ship probably carrying oil or road salt to the Port of Albany. Massive barges are all I ever really see on the water. It is very rare nowadays to even see recreational boats with people swimming or fishing, and even more rare to see commercial fishermen out on the water. It makes sense that the people who once lived on the water, lived off the water, are barely there anymore. The fishing industry experienced a brutal pandemic of its own at the hands of corporations that knowingly polluted the river. Starting in the 1970's and until this very day, fishermen are banned from catching and selling the fish they once lived off of. State regulations resulting from greedy, irresponsible pollution wiped out the Hudson River commercial fishing industry. The toxic pollutant, PCBs made themselves at home in the entire ecosystem of the river, rendering this once recreationally enjoyed, commercially profitable river into something that is now largely treated as not much more than a beautiful, aquatic highway.

The History of PCBs

Unlike COVID-19, which escalated quickly and had deadly impacts in a matter of days, the PCB pandemic accumulated over many years and didn't reach its crescendo until over 40 years after the compound was initially used along the Hudson River. In 1929, an agrochemical and agricultural biotechnology company called Monsanto Co. started to manufacture PCBs along the Hudson. It wasn't until 1936 that the first study revealed the major health and safety problems associated with the compound. Despite that finding, a company called General Electric followed in Monsanto's footsteps in 1947 and began to use PCBs in the manufacture of electrical capacitors at its plant in Fort Edward on the Eastern shore of the Hudson River. In 1952, they began to use it for the same purpose at a second location in the Village of Hudson Falls.

In 1968, there was an "Yusho" (oil poisoning) incident in the western part of Japan. It was later discovered that this epidemic was a mass, inadvertent poisoning of people through the direct consumption of PCB contaminated rice bran oil. This poisoning led to the worldwide, heightened awareness of the toxic effects of PCBs. Again, despite the increased awareness, further damage was done when, in 1973, the Fort Edward dam was removed from the upper Hudson River, causing large amounts of PCBs to flow downriver into the lower Hudson. This even happened after Robert Boyle, Hudson River fisherman and journalist, had five Striped Bass from the river near Verplanck, New York tested for pollutants in 1970. The results identified alarmingly high levels of PCBs. In October of 1970, he published an article with Sports Illustrated talking about the various pollutants being found in the fish of coastal seas. At the time, he did not know exactly where the PCBs were coming from. He shared his article and findings

with DEC Fisheries Director Carl Parker. Parker then conducted his own tests and his results corroborated Boyle's. Despite this, Parker suppressed his results and no action came of the findings. The Clean Water Act of 1972 helped the river by regulating companies dumping chemicals and discharging sewage and other contaminants into the river. Although PCB damage was different. The problem with PCBs is that they accumulate in the water, the sediment, and the fish themselves. The main concern is the accumulation of PCBs in people through directly eating the fish, which is why fisheries were closed and advisories were issued. The compounds are considered probable human carcinogens and are linked to other adverse effects like low birth weight, thyroid disease, as well as learning, memory, and immune system disorders.

In 1974, a study found high levels of PCBs in Hudson River fish and the US Food and Drug Administration set a safety threshold at 5 parts per million PCBs in fish for human consumption. Scientists measure chemical residues by either parts per billion or parts per million (ppm). To put it in perspective, as fisherman and journalist Robert Boyle puts it, one part per million is the equivalent of one ounce of vermouth in 7,812 gallons of gin, the ultimate dry martini. So if the safety threshold is 5 ppm, that's five ounces of vermouth in 39,060 gallons of gin. That is an extremely tiny drop in the bucket, and yet the tiny drop yields big consequences.

Two years later, in 1976, Congress passed the Toxic Substance Control Act banning the manufacture of PCBs and prohibiting all uses except in completely enclosed systems. Then, on February 25, 1976, the Department of Environmental Conservation made it illegal to fish in the upper portion of the Hudson from the Fort Edward dam to the federal dam at Albany, closed Hudson River commercial fisheries, and began to warn people about the dangers of consuming

Hudson River fish. In the same year, an administrative hearing found General Electric responsible for the PCB pollution.

Two months later, the worst flood in 100 years caused large amounts of polluted sediments to flow down the river, contaminating most of the river. Following this flood, General Electric stopped dumping PCBs into the river, put $1 million towards PCB research and $3 million towards monitoring the PCBs in the river in return for the state not blaming them for the pollution. Monsanto stopped producing PCBs the next year. On May 27, 1977, the EPA made it illegal to dump PCBs into navigable waterways under the Clean Water Act. Despite this action, the damage was done. PCBs had infiltrated the entire ecosystem of the Hudson River. In 1983, the EPA updated the Superfund National Priority list to include the upper Hudson River but issued a Record Of Decision calling for no action after doing PCB research in 1984. Later that year the FDA lowered the PCB safety threshold to 2 parts per million for human consumption following new risk data. Then, on March 5, 1985, the Department of Environmental Conservation closed commercial striped bass fisheries in New York Harbor and waters off of western Long Island, and started a tagging program for the eastern Long Island striped bass fishery. It wasn't until two years later, in March of 1987, that the DEC reopened the recreational striped bass fishery in the Long Island waters. Despite it's reopening, the health advisories against eating striped bass and other species remained in place.

The saga of General Electric was not over. In July of '87 the DEC declared GE's Hudson Falls Plant a State Superfund site. Two years later, they required GE to conduct further investigations into the contamination and look into clean up possibilities. Later that same year of 1989, the DEC requested the FDA to reconsider their previous 1984 federal Superfund "no

action" decision, urging that the PCB levels in fish were still unsafe for human consumption. New studies had indicated that dredging the river could be a possible solution to the PCB issue. Soin December of '89 the DEC released a PCB action plan, which included the dredging of 250,000 pounds of PCBs from the river. Following the dredging, on September 5, 1990, the DEC reopened limited commercial striped bass fishery on the east end of Long Island.

A year later, water testing in the upper Hudson revealed unusually high levels of PCBs. More tests in the following year continued to show very high PCB levels. In 1993, the DEC released information showing that PCB levels in the fish in the upper Hudson increased 300% between 1991 and 1992, linked to the very high levels of PCBs seen in the water column in September 1991. On May 28, 1993, General Electric said that PCBs have most likely been leaking from the ground at its Hudson Falls plant since at least the early 1980's. A sudden increase in water flow through the abandoned Allen Mill structure between the GE plant site and the river is blamed for the high levels. It was assumed that groundwater contaminated with PCBs had been leaking out of the rock face into the old mill for many years and was then being washed directly into the river. Only a few days after GE said PCBs had been leaking from the ground at its Hudson Falls plant, seven GE capacitors filled with PCBs were found in the river next to the Hudson Falls plant. The capacitors were removed from the river and the DEC told GE to clean up the land around the plant, but that they were not held responsible for cleaning up the river itself. On July 16, 1993, the DEC tested an "oily liquid" found seeping into the Allen Mills structure. It came back that the liquid was 72% pure PCBs. On October 14, 1973, the DEC held a public meeting in which they identified various areas and levels of contamination at the Hudson Falls site. The groundwater had trace levels up to 90% PCBs, sediment at Allen Mill raceways was between 2,000 to 50,000 parts per million, and sediment in the Hudson River adjacent to the

plant came back with 20,000 parts per million- a not so dry martini anymore. On the same day of this meeting, the DEC and GE agreed to begin a cleanup around the Hudson Falls and Fort Edward sites. Clean ups continued into 1995 when the DEC reopened the fisheries on the upper Hudson, but for recreational catch and release only. Throughout 1996 and 1997, scientists conducted studies which showed that PCBs actually evaporate from the river and tide-exposed sediment. Blood test results from local Hudson River residents showed high levels of PCBs, even in non-fish eaters. The US Fish and Wildlife Service also conducted studies on trees on the shore of the river, finding PCB levels that were classified as hazardous.

On September 25, 1997, Secretary of the Interior Bruce Babbitt held a press conference along the Hudson, demanding that GE stop trying to delay the PCB cleanup. He also asserted that the superfund classification should not be altered or weakened, and that all efforts by large corporations do so needed to stop immediately. As you can see here, the evidence supporting the dangers of PCB contamination is overwhelming. Yet, believe it or not, despite everything that has come before this point, in a shareholder meeting on April 22, 1998, GE CEO Jack Welch claimed that "PCBs do not pose adverse health risks." Three months later, Carol Browner, an EPA Administrator stated that, "GE tells us this contamination is not a problem. GE would have people of the Hudson River believe, and I quote: 'living in a PCB-laden area is not dangerous.' But science tells us the opposite is true… And concern about PCBs goes beyond cancer…" The issues with GE have persisted to this day in 2020. In April of 2019, the EPA issued the second of three Certificates of Completion of Remedial Action to GE for its PCB dredging over the last ten years. The third certificate will not be available to GE for over five more decades. Yet the amount of PCBs in portions of the river are still dangerously high. In August 2019, New York State sued the EPA citing evidence of that fact. In a memo, Governor Andrew Cuomo said

“Since the EPA has failed to hold GE accountable for restoring the river, New York is taking action to demand a full and complete remediation.”

So, in a tale as old as time--the classic fight between private corporation’s interests and public health, commercial fishermen were caught in the crossfire. With science saying one thing, private corporations saying another, and the state prioritizing the interests of GE over their own people, a storm of information suppression, doubting of science, and shady business and government practices was created that left commercial fishermen without a livelihood, stripped of a generational tradition. These fishermen, whose parents and grandparents had fished the river in the years before them, were filled with both confusion and anger. In his documentary film, fisherman John Cronin said that, “For the most part, the rivermen’s rage was reserved for the state. They could not reconcile that PCBs were dangerous enough to shut down their business, but safe enough to allow GE to discharge for three decades.” I mean, how can you expect people to have blind faith in an institution that has historically deceived them and prioritized the interests of private industries over them?

The Story of Edward Hatzmann

This is the story of Edward Hatzmann, commercial fisherman from Croton-On-Hudson in Westchester County, New York. The year is 1992.

My name is Edward Hatzmann. I was born on April 4, 1930. I am currently 62 years old and I live in Croton-On-Hudson, New York. I was actually raised here, and I ended up staying my whole life. My wife Josephine and I were married on August 14, 1955. We have six kids together, three sons, James, Edward Jr., and Howard, and three daughters, Diane, Carol, and Jill. I'm a retired Criminal Investigator for the Westchester District Attorney's Office. I was also a Westchester County Parkway Police Officer. As for hobbies, I love to work with wood and build boats, though one of my main passions in life has always been fishing. I belong to the Hudson River Fishermen's Association. The association started in 1966 when a guy named Robert (Bob) Boyle got together with a few fishermen up in Garrison, near West Point. They were sick of seeing the industrial abuse of the river. Since the industrial revolution, the river has taken a beating from all the pollutants. These guys started the association in order to try and bring the Hudson back to life. It's not like there weren't already any laws on the books against polluting the waters in this country, they just weren't actually enforced. Bob Boyle, he forced the government to enforce them.

The Hudson River Fishermen's Association was an environmental watchdog organization that was formed in 1966 by a group of concerned fishermen who saw the river dying. The main man being Robert (Bob) Boyle, a Brooklyn-born sportswriter, conservationist, and Hudson River fisherman. Bob Boyle was the unofficial guardian

angel of the river. He was among the first journalists to report that North American fish were contaminated with PCBs and sounded the alarms on global warming many decades before it became as known as it is today.

In the conception of the Hudson River Fishermen's Association, Bob was accompanied by a league of blue-collar commercial and recreational fishermen. Many of them were former Marines, factory workers, or carpenters. The river was these men's' home, workplace, and sanctuary. In 1966, the association held their first public meeting at the American Legion Hall in Crotonville, New York. Rivermen, some descending from generations of fishermen, came to the mic to tell stories of their runs with Striped Bass, Shad, and Sturgeon overflowing with valuable caviar. Yet, in all of this joyful recollection, all of them spoke of the devastating change they have witnessed in the river since the industrial revolution. The polluters were robbing the people of their river. New York City was dumping 1.5 billion gallons of raw sewage into the river every day, a General Motors plant in Tarrytown dyed the river a different color each week with their paints, the Indian Power Plant killed millions of fish a day, the National Guard filled tidal wetlands, Penn Central Railroad discharged oil into the river, blackening the beaches and making the Shad taste of diesel. Before anyone cared about the wellbeing of the river or the environment, these men did. They came together to fight against the destruction happening in front of their eyes. They came together to fight because their government had failed them in doing so. It seemed as though all odds were stacked against them, with no one to defend them and their river but themselves... and defend, they did.

In his research for an article about fishing on the Hudson, Boyle came across two laws: the Rivers and Harbors Act of 1888 and the Refuse Act of 1899. The Refuse Act, which is section 13 of the River and Harbors Act says that: "It shall not be lawful to throw, discharge, or deposit, or cause, suffer, or procure to be thrown, discharged, or deposited either from or out of any ship, barge, or other floating craft of any kind, or from the shore, wharf, manufacturing establishment, or mill of any kind, any refuse matter of any kind or description whatever other than that flowing from streets and sewers and passing therefrom in a liquid state, into any navigable water of the United States, or into any tributary of any navigable water from which the same shall float or be washed into such navigable water." So, Ed is correct. The laws were on the books, but like many laws, they fell through the cracks. Bob Boyle and those involved in the beginning of the association vowed to hold polluters accountable for the destruction they were causing. They used the Refuse Act, which guaranteed a bounty reward for those who reported violations, to track down and prosecute the main offenders. In 1986, the association managed to shut down the Penn Central Pipe and collected $2,000. This was the first bounty reward ever given under the 19th-century statute. They continued to collect even larger bounties against companies like Standard Brands, American Cyanamid, and Anaconda Wire and Copper. The money they collected went towards building and launching the river's first Riverkeeper boat. To this day, the boat patrols the river for environmental law breakers. An activist and former commercial fisherman named John Cronin became the first full-time riverkeeper in 1983. The Hudson River Fishermen's Association renamed themselves Riverkeeper in 1986. They have brought hundreds of

polluters to justice over the years and have served as the inspiration for the creation of over 270 “waterkeeper” organizations all over the world.

I started fishing commercially around 1966 or so, about the same time the association formed 26 years ago. A friend, Henry Gourdine, gave me some pointers when I first started talking about getting into fishing, but the man who really taught me what I know was Bill Harbolic. God rest his soul, he’s dead now, but the river was his life. He really took me by the hand, taught me how to man the nets. At the time, I had my boat at Pete Smith's, right next to the Viking Boatyard in Verplanck, New York. Verplanck is a hamlet, a census designated place located in the town of Cortlandt in Westchester County. I used to do a lot of crabbing there. Bill and I met because someone from the boatyard just asked me one day if I wanted a partner to go crabbing with. Bill had a heart problem and he was looking for a friend. So, one day I took him with me and, as they say, the rest was history. We were like father and son from that day on. We got involved in Shad netting, we went out a lot. Never at night though because, god forbid something happened, Bill couldn’t swim. Him and I, we just hit it off, with our ups and downs of course, but we were close. Bill really lived out there on the water. He used to go out ice fishing with some guys in the winter on Peekskill Bay. They would drill trenches in the ice and cast nets underneath into the water. They used sticks to tie their nets off and would lay them across the trench so the nets wouldn’t sink. They would haul it, catching tons of Sturgeon, Big White Perch, and Shad. They occasionally caught some Bass, although I don’t recall him saying that, but I’m sure they did. You know, they could’ve swam by and got gill netted. I never went ice fishing with him like that, and I don’t think the ice froze that much since I’ve been fishing to where you could trust it like they used to.

Ed's relationship with Bill is a great example of the type of love and community that was present among fishermen. Older, more seasoned fishermen often took younger guys under their wing, taught them the ropes. As Ed said, Bill was a fatherlike figure to him. While the industry was deteriorating, these men held onto one another and came together to protect their livelihood. Think about yourself now in the middle of this pandemic. Most of us want to be around our loved ones and talk to our friends about the struggles we're experiencing. The pool of people we could talk to about dealing with our losses is large as we are all experiencing the same thing. For these fishermen, the only people they could talk to about how they felt was other fishermen, the few of them that were left as the river became more polluted and the fisheries closed.

I met Henry Gourdine when I was 12 years old. I was always going down the river, Henry was, and still is actually, at Vanguard Boat Place. He had a shed down the road there. It was a building, a camp, where the men slept upstairs, he had a cook, and two big row boats that he used to tow out to teach the guys how to pull the nets. Back then, the shad were about a nickel a pound and Henry had these 19-20-foot rowboat floors completely filled with fish. He would teach the men to mend the nets too. He'd lay the nets out on long poles to dry. Then he'd bring them in and there was this big ironing board and broom sticks. I helped him with that when I was young. I forget exactly what it was, but he'd pay us about 50 cents an hour to tie the net up across the board and stand there beating it. They were either linen or cotton nets and you'd have

to break up the seaweed, the residue and the dirt. You'd shake them and get them to where they were practically just linen again, like white or yellowish white. You'd put it in a box and then Henry and his men would take them over where they had long Shad poles up in the air, about waist high. They'd stretch them out on that and find the holes that the fish had put there and they would mend them. That's how I met Henry and on and off over the years we've been close. Talk about a man who lived on the river. He took up fishing as a profession in 1920 when he was 17 and hasn't done anything else since. Henry was special in the fishing community. No one did it quite like him. He built his own boats, cut and trimmed trees into the poles to anchor his nets, and really became famous just for his immense knowledge of the river. I often went to him for pointers in my own fishing, Bill and I would. I'd ask what size net to get, and what'd he think of the nylon net compared to the monofilament. I'd ask, "Am I fishing deep enough?" "Am I putting too much weight on the bottom of my lines?" You know, little chit chats or, "I got a load of stripers last night", just fisherman's talk. I'm sure a lot of people wanted to ask Henry a lot of questions about fishing, but this guy was always either in the river, just getting out of the river mending nets, or sleeping. I mean, it's like a sailor that's been at sea for six months and you can't keep him out of the town, except with Henry, you can't keep him out of the river. To this day, he's telling me how much he's dying to get his boat in the water.

There was another fisherman I was really inspired by too, although I was a lot younger. I used to live down on South Highland Avenue, we spent summers down on Sparta Dock. There I met Burt Sampson Sr.. He was a big hunchback guy, they say from hauling all those nets, but that's neither here nor there. He used to walk from Sparta down to Kenny's Cove, which is now Briarcliff, the railroad station. He kept a boat at Kenny's Cove. He would row out and haul his nets. He had one of those wooden wheelbarrows where he put his 100-pound box of Shad and

wheeled them about half a mile, maybe a bit more, back up to Sparta or wherever the heck he went with them up there. He wheeled that heavy thing over the railroad tracks, you know how they get those rough stones that run off from the bed of the tracks, that must've been pretty difficult. A lot of people used to shy away from Burt because they thought he could be dangerous, but he wasn't, he was a very gentle man. He talked a lot but always kept to himself. You used to be able to see him walking down the tracks with oars on his shoulders, mumbling away. He's dead now, died in his nineties.

I spent a lot of time down on South Highland as a kid. There was a brook down in the back that we used to go fish in. I always liked fishing, even in freshwater. Something about it always intrigued me, I guess it was just something to do. My friends and I would even go swimming at Sparta, but always at the outgoing tide because the tankers would come up and dump their bilge and their oil slicks. You could literally see it coming in. There were also raw sewage plants. There was one that dumped right there by Sparta, and another one in Scarborough, and they used to dump that raw stuff right in. Believe it or not, that was actually the best time to go fishing. There would be people down there fishing alongside the sewage, and they would be hauling out perch and catfish as fast as you could bait the hook, only on the outgoing tide though, otherwise the sewage would come right back at you.

Bilge and raw sewage dumping were other major sources of pollution of the river for many years. As cities grew along the Hudson, their sewage discharges increased. Raw sewage was continuously dumped by the billions of gallons into the river every day from

New York City up north to Albany. Off Manhattan alone, 150 million gallons of raw sewage was dumped into the river every day. In fact, the river was referred to as an "open sewer" for most of the nineteenth and twentieth centuries. In the late 1800's they would put floating screens in the water to protect swimmers from raw wastewater off Coney Island. Illnesses like cholera, resulting from the wastewater, were common among New Yorkers. Beyond illness, the water looked disgusting and smelled repulsive. It wasn't until 1930 that sewage treatment plants even began to be built. By 1952 there were eleven water pollution control plants in New York City. In 1965, New Yorkers voted to pass a billion dollar Pure Waters Bond Act in order to fund sewage treatment along the river. The most comprehensive change happened after the Clean Water Act was passed in 1972. The Clean Water Act mandated that treatment plants remove 85% of biological oxygen demand and total suspended solids. The act also provided the necessary funding to construct new and upgrade old plants to sufficiently treat sewage. This, of course, did not solve the problem overnight as many treatment plants delayed upgrades up until the 1980s, and combined sewer overflow, as well as offshore dumping still remains a problem.

It is sad that when Ed was young, he and his friends had to coordinate the time they swam and enjoyed the river with the outgoing tide in order to avoid being flushed by bilge from tankers and sewage from untreated plants. Recreational swimming is scarce nowadays, even though raw sewage is no longer dumped directly into the river, storms will often still cause combined overflow of untreated sewage, not to mention boat traffic and floating debris doesn't make for a peaceful swimming environment.

Despite the negative effects of dumping, it makes sense why Ed would have luck fishing near the raw sewage plants in Sparta. The fish are actually attracted to the sewage. This is a well-known phenomenon among fishermen, as many purposely fish near sewage outlets and at times when dumping is occurring. Since fish eat fecal solids, studies have shown that fish are attracted to wastewater outfalls, raising the possibility that these sites act as an ecological trap. Fish abundance, species richness, and species diversity were generally highest near wastewater treatment plant outfalls.

When I started fishing commercially, I was still working in law enforcement. I would actually save up my five or six weeks off and take them all at once for Shad season, and it usually ended up that I got the worst weather. I never really made a killing during Shad season. I mean, the most I ever pulled was close to 2,000 feet of net, which I was licensed for from March 15 until June 15. Nowadays, I just buy a couple hundred feet of net, actually just 100 feet should I say, for the whole season. Just enough that if I want to go out there, or if my friends want to, I have 100 feet of net to get some Shad or some Sturgeon. I actually prefer catching some Sturgeon because I used to do my own smoking. I would hickory smoke them. I want to know what happened to the Sturgeon. There used to be so many and now there are hardly any being caught out there.

Before 1900, Atlantic Sturgeon were abundant in the Hudson River. People would catch large amounts of them and harvest for their caviar. These fish were nicknamed "Albany Beef", as they were commonly served in New York's Capital. One adult

female's meat and caviar actually sold for up to $3,000 during the 1900s, which the DEC says led to overfishing. These once abundant and profitable fish are now protected with no one permitted to fish them since they have decreased dramatically in population. Another type of Sturgeon in the Hudson, the Short-nosed Sturgeon, was in decline during the late 1800s and early 1900s when the Hudson was being heavily used as a pollutant dumping ground. Damming of the Hudson at Troy threatened the species by cutting them off from one of their traditional spawning grounds. A big reason they were declining was because they were often caught as by-catch during the Atlantic Sturgeon harvest season. The population is stable today as the Sturgeon fishery on the Hudson remains closed.

When I would take my five to six-week vacation to fish, I started out stake netting. I ended up switching to anchoring because stake netting became such a hassle. I would have to go out by myself and find my own area, then the Corps of Engineers would assign areas and you had to stay there, in that 1,500 feet up and down river. They had regular areas assigned on an area map, and you were logged in as such. Being out there by myself was like going to church, well maybe not going to church, but like meditating. In other words, you get out there in the early morning, you've got the fog lifting, and you've got your geese, your swans, your baby ducks, you'll get an occasional splash in on shore, I don't know whether it's a turtle or a fish trying to get away from another one, you know, you can't see it. In the fall, when you go out crabbing, you've got your flocks of Canadian honkers and ducks and so forth, they fly the river. The sunset, sunrise, depending on how long, how early you go. The change of the tides. It's my time for myself and it's really special to me.

I caught a lot of White Perch, Catfish, and occasional, well, Sunfish or pumpkin seeds or whatever you want to call them. Occasionally you get a nice Bass, and on the rocky shores the Stripers would come right in and feed, they love the glass shrimp. In all my time fishing the river, I've definitely noticed a lot of changes in the kinds of fish and how much of them there are. That being said, I don't understand why the DEC put a ban on the Bass. They say that there are less PCBs in the fish than there used to be, but that the decrease wasn't enough to lift the ban. The bass have not declined in this river.

The DEC has recognized the commercial profitability of Striped Bass yet states that PCB levels in these fish are too high for consumption. PCB levels in fish were highest in 1976, when the state banned their sale. Ed is referring to the state of the Bass in 1992, and he is correct. In a DEC report, tables show that in 1976, a sample size of 49 Striped Bass taken from the Tappan Zee Bridge testing site, averaging 544 mm in length, averaged 11.20 ppm of total PCBs. The same report shows a table from 1990 with the same Tappan Zee testing site, and in a sample size of 48 Striped Bass, averaging 646 mm in length, there was an average 1.98 ppm of total PCBs. We can see here that the total average PCB level in these fish did in fact drop dramatically, leading commercial fishermen like Ed to wonder why they were still banned from getting back out on the water.

Despite this drop, the DEC said that levels remained above the federal action level of two ppm, so the fishery remained closed. In terms of Striped Bass population, it has steadily increased from 1980 and onward. This is largely credited to the ban which allowed the Bass to spawn without the threat of fishing. Conservationists and recreational

anglers saw any lift of regulations during the 1990s as a setback, stating that the reason the Striped Bass fishery is restoring is because of the ban on commercial fishing. The DEC also shared concerns that the levels were erratic depending on the size and location of the fish. While some fish had levels below the federal action level, others had levels significantly higher. The fishery remained closed during the year Ed is referring to, but seven years later in 1999, the continued closure of the fishery became quite contentious when environmental scientists found that Bass tested within the first 50 miles north of Manhattan contained average PCB levels that fell below the federal action level. Several independent environmental groups urged that it was too soon to open the fishery and that they couldn't possibly guarantee the health risks were gone at that point. During a hearing in April of 1999, Richard L. Brodsky, the chairman of the New York State Assembly Committee on Environmental Conservation, stated that "You don't usually see this kind of intensity over a fish, but the striped bass crystallize all our fears and hopes for the Hudson River." The ban had driven commercial fishing almost completely out of business and if the fishery were to reopen, it would restore some sliver of hope for those who had been left high and dry. Shad netters were forced to throw back any Bass that would get caught in their nets because of the regulations, which required as much labor and fishing for the Shad alone. If they were able to keep and sell those Bass as well, they would be able to make a better living. Though it was made clear during this hearing not everyone was concerned for the commercial fishing industry. The rising sport-fishing industry on the river had several representatives present who were strongly opposed to any re-establishment of commercial fishing for Bass. They feared any depletion of the Bass population in the Hudson would negatively impact their fisheries both in the

Hudson and along the Atlantic coast. There were under a dozen of what was left of Hudson River commercial fishermen at the meeting, one being the president of Riverkeeper, John Cronin. Cronin offered many reasons for reopening the fishery and reminded the committee that it was the commercial fishermen themselves who led the fight against GE and urged the state to force the company to clean up the river. These fishermen-turned-environmental-activists were falsely promised by state officials that they would do all they could to reopen the Bass fishery once the pollution was cleaned up.

I can understand Ed and other fishermen's distrust in the state. They had done so much for the river, leading the effort to restore its abundance and hold polluters accountable for the damage they had caused. And how were they repaid? Who showed them gratitude for their effort, their love and dedication? I think they expected much more effort from the state than what was given in order to restore commercial fisheries. All of the fisheries that were closed in 1976 remain closed to this day, and even Shad fisheries have been closed since. Recreational Bass fisheries are open now with limits.

I'm, of course, talking about my own personal experience, and I'll tell you, even going down there with Bob Boyle, you go down in the fall of the year and there are plenty of Striped Bass. There are incredible juvenile Striped Bass still out there. My son has been going down at night with the hook and line, they've been catching plenty of just under 18-inch Bass, which are ideal. It shows that you've got rotation down there. What I have heard is that there is a lack of Shad this year. There aren't too many Buck Shad. The consensus with the guys I've talked to is

that down off the coast of Maryland, South and North Carolina they have these nets, international waters, where there is no limitation on lift periods, and they're setting out five, four, three, six whatever miles of net. So, nothing is coming up here. The downtick in population is going to show up here because this is where they spawn. I've also noticed a lack of Sturgeon out here too. Now, my first years on the stakes out there, Texas Instruments used to be paid by Con Ed, I think, to do a survey out there. They used to tag the Sturgeon, and they tagged a lot of Sturgeon. I caught one 4 inches long in the top of the sim line on the net with a tag in it. What happened to all those tagged fish? I haven't heard reports of any tagged fish coming back, unless they're keeping it a secret. I honestly think it's because they're being caught out in the ocean before they come back in here. In the last year, between all the Sturgeon fishermen I know, I don't think they've caught even seven of them. And it's not because they're overfished in the Hudson. I mean, the few Sturgeon that they take out of here is like nothing. I mean, there's more than that lost in natural deaths. This is again, of course, just my opinion.

Why do I think they're disappearing? I don't think it's because of the river. I mean, you can go out there, and you go in the fall of the year, you can actually see your line going down. Like I said earlier, you used to only be able to swim in the river when the tide was going out. The irony is that at that time, the Croton Point Park was open, the Kingsland Point Park was open and there was nothing saying that you couldn't go swim in there. Maybe once in a while after a heavy rain they would stop the beaches for a while, but nothing like it is now. I mean, I don't know the reasons scientifically, but I know that 50 years I've been out there, yes, it does look cleaner, yes, there are more of a variety of other fish, but then again, let me say that those fish could have been present the whole time, it's just that nobody looked for them. The same as your

sturgeon out there now. Who knows? Even when they were out there plentiful, how many fishermen went out with a hook and line?

The state of New York will tell you not to eat any fish from the Hudson anymore, or eat it only once, or something like that. I can understand that. In my opinion, the reason they're doing this, they can't say go ahead and eat it because then they'll leave themselves open for lawsuits. I can understand their side on that. If you didn't know, between about 1947 and 1977 a company called General Electric (GE) dumped an estimated 1.3 million pounds of polychlorinated biphenyls (PCBs) into the Hudson river. There were two GE capacitor manufacturing plants located in Fort Edward and Hudson Falls, about 50 miles north of Albany. PCBs used to be used in a lot of industrial processes including electrical capacitors. PCBs are toxic chemicals and they can't break down once in the environment, so they stay in the air, water, and soil. In this case, on the Hudson, PCBs are still found in the sediment, water, and wildlife. They've basically made themselves at home in the river's ecosystem. They used to say that any concentration in Shad under five parts per million was safe. Now, I understand it has gone down to like two parts per million or something. Getting back to the method of testing, I'm no scientist but they go out there at the same time every day to take their samples from the river. That's what I've been told, and they get so many fish. So many fish. Well, that isn't the way it works. You can go down there at dead low tide, throw your hook and line out there, you get nothing. Come back 45 minutes, an hour later, as soon as the tide changes, and you can't keep your hook in the water. Whether the tide stimulates a feeding frenzy or whatever, I don't know, but if you go out there and say, "Well, the Shad are in a decline", and it's on an outgoing tide, but it's the same time, we did it the same time yesterday, maybe on the outgoing tide they're standing pat. Or let's say the weather is really cold, they're swimming slower. These are my own observations. Maybe they're

swimming slower, or the good Lord has hit the time to say, “Hey, get up there and spawn.” They’re saying, “Hold back. You’re going to get up there too early and it’s going to be too cold, and you’re going to lay your eggs or whatever, if you can, and they're going to die.” This is nature. I mean, these are my feelings on it, that you’ve got to go with the tide, you’ve got to go with the weather. There are a lot of elements that I feel come into it.

It happens with crabbing too. We’ll be out there all day and get nothing. Then, in the last 45 minutes, we’ll pull something up and boom. We used to sell the crabs. That was a while back though. Now they’re getting strict out there. I actually never used to know that you needed a license to sell them. They are really clamping down on it now, there are a lot of people out there catching and selling commercially. The state will never get rich on the license they charge. See, this is where they’re missing the boat. They talk about putting restrictions, restrictions, restrictions but what are they doing for the fishermen? They’re saying to the fishermen, “You can’t catch this and you can’t catch that and you can’t do this.” Now, this is a beautiful hatchery out here, now they’re taking our stuff away from us out in the ocean before it comes in here, and they’re doing it legally. Now, you’ve got to go to the federal government, and what are they going to do? Another thing I add, they’re saying, there was an article in the paper a couple weeks ago, a month ago maybe, that to the George Washington Bridge the fish are contaminated, but once they go south of that bridge, they’re okay. Now my mother raised dumb kids, not stupid. Right? It’s like telling me, we’re sitting here in the kitchen, and I’m talking to you. If I have the chicken pox, now there is my neighbor’s yard right there, as soon as I cross over that property line, I don’t have the chicken pox. I mean, how can a scientist or whatever say that the fish can get rid of that so fast, when south of the George Washington Bridge, the city waters are the most polluted going? You tell me. I mean, and you sit here, and you shake your head, and you wind up

more confused. When it first started out, the bigger fish, the less PCBs were involved in his body. Now, the smaller fish, they go from one another. They're in the freshwater now, there are PCBs in freshwater.

You'll notice, whenever they want to talk about the Hudson River and its PCBs and all their bad effects on fish, it's right about time when the first commercial fisherman is about to wet his nets. You can check the records; check the books and you'll see it. It's almost like a vendetta. I mean, what happens during the winter months? I mean, I'm sure that there are still studies done on it. It's almost like they've got a campaign going, like the presidential nomination.

The Hudson River estuary is incredibly diverse and has historically been known for its abundance. It is home to many migratory fish like the Atlantic Sturgeon, Striped Bass, and American Shad that travel up the river to spawn each year. They live in the freshwater of the Hudson for the first few months of life before moving out to the Atlantic to mature. The DEC has implemented several long-term seining programs in order to monitor the fish populations. And yet Ed is correct that monitoring the populations of these fish in the Hudson alone is not reliable as the fish range so far along the Atlantic coast. Due to this fact, the species are generally managed through the Atlantic States Marine Fisheries Commission. The commission relies on a combination of both fishery-dependent and independent data collected from recreational and commercial fisheries and information from monitoring programs and research surveys. Because of the wide array of agencies that collect data and the differing methods by which they do so, there is natural error and variability in the results. There have been efforts put in place to

standardize the process, but it is impossible to do so completely, and it will, therefore, never be a flawless process.

Even if the fishery stock data is unreliable and inaccurate, the main reason behind the commercial fishing ban in the Hudson River is the unsafe levels of PCBs present in the fish. When it comes to the fish populations in the Hudson, Ed isn't wrong. Both the DEC and the Atlantic States Marine Fisheries Commission note overfishing as a main cause of any decreased population. Overfishing that occurs in the North and Mid-Atlantic regions of the Delaware Bay and the Bay of Fundy. Since these fisheries have remained open, many fish like the American Shad that are native to the Hudson estuary are caught before they can return to the Hudson to spawn. Then, the smaller amount of them that do make it back, are protected, closing even the Shad fishery to the Hudson River men. It is unfair practice that bans are in place in the Hudson, yet fishermen down south can benefit from that protection when the older fish migrate down the coast.

Ed doesn't believe that the fish are disappearing because of the river and the pollution, in fact he thinks the river is clear and clean. He attributes the population depletion to the fishing regulations and the fact that fish are all caught down South. The river is certainly not crystal clean and clear like Ed says, but he is right about the overfishing down South being quite unfair to the Hudson fisheries. Now, is this "a vendetta"? I don't know. I don't see the advantage to the state for purposely repressing the commercial industry. It is clear that Ed feels victimized and wronged. He sees these regulations as predominantly some kind of political agenda rather than on the basis of

science. He, understandably, feels left behind as recreational fisheries were opened on a limited basis, while commercial ones remained closed.

This brings us back to how difficult it must be to undergo such an excruciating loss, a pandemic-level loss, as the world continues on around you and as others continue to prosper. I think that New York State was delayed and weak in their response to the pollution at the hands of companies like GE. Possibly, as Ed believes, if they had acted sooner and stronger, the commercial fisheries could have potentially reopened sooner, and the loss would have been mitigated. Unlike Ed, I don't think this was a personal attack against the fishermen, but more just an all too common lack of care and concern for the natural environment, a result of the state prioritizing a profitable companies' interests over those of their own hard-working citizens.

Even today, during the COVID-19 pandemic, the deadly virus attacks more than just our physical health. It is driving small business owners out of business and making large corporations like Amazon rich. People who are losing their jobs and are now worrying about how to feed their families are angry and confused. How can the government impose regulations that drive them into poverty? What if the government acted sooner to prevent the spread of COVID-19? Maybe then they could have stayed open and stayed afloat. Times like these, just like what happened with the fishermen, is a breeding ground for doubt, confusion, and unprecedented anger. There is a link between these feelings and belief in conspiracy theories, a phenomenon prevalent throughout human history. A 2017 study stated, "Evidence suggests that the aversive feelings that people experience when in crisis—fear, uncertainty, and the feeling of being out of

control—stimulate a motivation to make sense of the situation, increasing the likelihood of perceiving conspiracies in social situations." Commercial fishermen on the Hudson had a strange relationship with control of the river. Historically, they were the people who knew the river best. They were out there in the early mornings and late nights, while most other people were home sleeping in the warmth of their homes. When the river was being abused by GE and left unprotected by the state, the fishermen stepped up to the plate and formed an association that single handedly brought the polluters to justice. They took action to protect the river they loved and to protect the livelihood that their families relied upon for generations. Yet, despite this unprecedented effort and passion for a body of water, their fisheries were shut down and remain that way to this very day, 64 years later.

These men were never really repaid and validated for the work they put in to protect the river they loved so much. If that was me, I would feel like the state had it out for me as well. How could you not feel like the victim? Again, similar to what is happening today, I can sit here and tell small business owners that the government doesn't want to screw you over and that they are just trying to protect people, but then again I'm not the one filing for unemployment and staring at my ceiling every night worrying about how I'm going to pay my rent or feed my children. It is easy when you're looking at it from the outside to think that these people are angry for no reason and that there's no other option, but for them it's their life you're talking about. There is a reason for the historical link between uncertainty and conspiracy. It is puzzling to wonder why the government would take so much from you, and it is easy to find comfort in a story that gives reason for it, a story that gives you someone to focus your anger at.

Us fishermen, all we have is each other when you think of it. I mean, who else is- the state isn't going to come down here. They send me a book that must have cost, I don't even know how much to put together, full of parts per billion, this and that, and charts and everything else, showing what the studies say. I'm a layman, you know. I'm not a chemist or a doctor that understands this stuff. I mean, why can't they take that, if it's going to the fishermen, to put it in layman's language? It's things like that. I mean, you know, if you're going to talk to the fishermen, you talk in their language. If you want to get through to a Pace graduate, you talk in his language. If they speak Japanese, or the talk- you talk in their language. There were times, though, when they used to call us, and the guys went out and took samples of the scales, the length of the fish, and all that. They would call you up and ask you if it was okay. We beckoned them aboard, we didn't mind at all. They would call up, "Fine. Come on aboard. And you want some Shad roe, we can't do it, it's strictly business." Come on. I mean, you know he's not going to change his report. When he goes back and those scales show that that fish is so old, or if he takes the length and width and tells you to throw, you can't change that, that's right there. These are my views on it, which my opinion I guess I'm entitled to. I try to be impartial; I try to face it with an open mind, and there are some things that just- I know that the people are out there doing it for protection. I think they dragged their feet back then when General Electric dumped their PCBs in the river. They got fined $2 million, and I'll bet the fishermen have lost that much, probably more.

I think that the state needs to protect their own people first. It's like charity, you take care of your family first and then you help others. I think they're going to find there is ample Striped Bass. It's only 2 percent PCBs out there. Put a size limit on them if they want. If they put too large of a size limit, it's no good because, say, you're a family of two, one small nice fish, 20, 21 inches is ideal, there is no waste. There's a lot to take in there, but it's not as complicated as they make it seem. They have all the statistics in front of them. Sadly, if they started giving out fishing licenses again, I don't think a lot of young people would get involved in the industry. They wouldn't because they don't want to work. In other words, it's a love of the river, not just a love of the money. The money, the amount of hours that you put in mending in your nets, making new nets, the cost has gone up, not only that, you've got to contend with if Delaware or down south gets a bug run of Shad, then by the time they hit here or Connecticut, the market is flooded. It's the love of doing it. In other words, why should my son, as for instance, or anybody's son go out there on the river, at all hours of the night, this and that, when they can go part-time and help somebody cutting grass for $15 an hour or $20 an hour off the books? Or even legally, even with all the taxes taken out, in the long run they're going to make more. I mean, Shad season is only three months, and the market up here is much worse. Down in Maryland, you can get 80 cents a pound, but as soon as the shad hit the Hudson, they go down to 40 or 50 cents a pound. Then you have to add in the cost of your ice and the cost of delivery.

When the New York State Commercial Fishermen's Association first started, I have to say, I felt a little instrumental, in that I spoke to the DeGroats right when they put the ban on, he wanted me to get the boys together and we'll have a meeting. That's the first time I met Bob Garielson, he came over to the DeGroats and I said "You've got to do something. We've got to get a meeting going or something, or a club or something." Then Bob DeGroat became president

and has been ever since. Dave Hardy, he is deceased now, but he fished out of Piermont, he was an officer who helped get it started too. They couldn't use the Hudson River Fishermen's Association because of that Bob Boyle organization, the other one. So, they had to put "New York State Commercial Fishermen's Association", and it's been going ever since. Bob has done a great job with it, goes to all the meetings and everything. I'm very negligent on meetings, always have been, even back then.

It's kind of hard to say if the association had any effects. They haven't gotten any better, they've been holding their own let's put it that way. They're still fishing, those who still want to fish still are. Whereas if they didn't have the association, I don't think any of them would be fishing out there anymore. A lot of them have gotten away from it because- and like I say, it's a love of the sport, you go out there, you do it to relax, as well as if you can make some money off it, fine. It's hard to say. I mean, the state makes up their mind to do something, they're going to do it. You can go up there and talk to them, and this is what I found out, you can suggest this and suggest that, and they'll sit there, and they'll listen, but that's it. I don't know if they get the attitude, "Well, he's only a fisherman. He's not going to tell me what to do," and all that, but he forgets, you go back in the Bible, we're all descendants of fishermen. I'm not a religious person, a fanatic, but I found that out. I keep bringing it up.

If they lifted the ban on Bass I would definitely go back. Honestly, I'd go back out just for the pot, just to go out there and just keep busy. My family would be happy if I could get back out there. They never really worried about me when I went out there because I've always respected the river. I know how powerful it is, a storm could come over the mountains in two

minutes when you're down river. If you don't respect it, then shame on you, you're asking for trouble.

Conclusion

Close your eyes. You're sitting at Memorial Park in Nyack, New York, right on the Hudson River. It's a Saturday afternoon, the end of May. The year is 2020. Last night you went out to dinner with your family and ordered the seared Sturgeon. It was so fresh and delicious, and even more so that you know exactly where it came from and you know that the population of sturgeon are thriving. The air is crisp and cool today but warm enough to be comfortable in shorts and a light sweater. The trees around you are budding, birds are singing. The water is calm, barely any wind. There are a few boats in the distance. One of them is a stern trawler. It's white with wood paneling. There is a man standing at the bow in bright yellow waders and a navy bucket hat. It's close enough to shore that you can hear the man's whistling travel over the water. He seems so content, so at home out there. You're awestruck by the stillness and can only imagine how peaceful it must be to spend your time and earn a living on such a historic river. You watch him slowly troll downstream, filled with appreciation for people like this man who not only provide you with fresh food, but respect and take care of the beautiful, scenic Hudson River.

What if the story ended that way? I would have grown up on a different river. The culture would be different, the food, everything. That is the scenario that probably ran through the minds of men like Ed as they were forced to sit back for years and wait for the state to reopen the fisheries. Unfortunately, that day never came for most of those men. Ed passed away in 2004 and even today, sixteen years later, he would still be waiting.

In people's beliefs and fears, there is typically some truth. Ed's anger with the state was not unfounded. The state didn't do enough, and they didn't do it in time, plain and simple. Commercial fishermen fell by the wayside, slipped through the cracks of the system, despite the fact that they pioneered the campaign to restore the Hudson River. As a historic industry, they were not prioritized in the way they should have been. Was it a conspiracy against them? I don't think so. I don't believe anyone intentionally set out to hurt them, but nonetheless, they were. Edward Hatzmann and the original commercial fisherman who saw injustice and fought against it in order to revive their river have inspired environmental watchdog groups throughout the world. It is too late to go back and change what happened, but crucial that we remember COVID-19 is not the first pandemic to create uncertainty and doubt, and to strip innocent people of not only their income, but the things they hold dear to their hearts.

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