00:02 – 00:25
VO: Welcome to 10 Frames Per Second, podcast about photojournalism by photojournalists, but for everyone. With your hosts, Joe Giordano and Molly Roberts. New episodes drop every Tuesday on 10FPS.net or anywhere you get your podcasts. You can also catch back episodes on wloy.org as all episodes are recorded and produced at WLOY Loyola Radio in Maryland.

00:28 – 01:12
Molly: Welcome back to 10 frames per second. Today we have George Steinmetz with us. George graduated from Stanford University with a degree in geophysics. He began his career in photography after hitchhiking through Africa for 28 months. He spent 15 years exploring the world's deserts, mainly while piloting a motorized paraglider. This gizmo enabled a view of the world from above, which can now be compared to drone photography, except that George was actually aloft in this flying machine, resulting in some unintended adventures. George focuses on telling stories about remote landscapes, our changing climate, and how we can feed the

01:12 – 01:49
Molly: ever-growing world population. Since 1986, he has completed more than 40 major photo essays for Nat Geo and 25 stories for Geo Magazine in Germany. He's published 6 books. His latest is titled Feed the Planet, a Photographic Journey to the World's Food, which just came out in October. The book focuses on how sustainably produced food can be made accessible to the Earth's growing population in the face of destabilizing climate change. As Michael Pollan puts it, where does our food come from? Hello,

01:49 – 01:51
Joe: George. Welcome to the show.

01:51 – 01:53
George Steinmetz: Thank you, nice to be here.

01:53 – 01:59
Molly: What was it about geography and traveling in Africa that turned you in the direction of photography?

02:00 – 02:31
George Steinmetz: Well, for me, when I was a young person, I grew up in Los Angeles and I went to Stanford. Life had been pretty easy and I wanted to see something very different. And Africa was the most kind of different or exotic, if you will, place I could think of. Something I'd seen as a kid looking at the pages of National Geographic and I wanted to go and I thought that would be an exciting place to explore and get to understand.

02:32 – 02:45

Molly: So did you go there, you went with your camera in hand because you were already a fan of Nat Geo and you already had it in your mind, Nat Geo, as a geophysical graduate.

02:46 - 03:03
George Steinmetz: It wasn't that, it was more like, I was just curious. It was, to me, it was the unknown. I wanted to have I was afraid about graduating from Stanford and having to make a living and I was on the track media in the oil business and I wasn't particularly excited about the oil business and yeah that's

03:03 - 03:05
Molly: where that would lead that degree right

03:05 - 03:28
George Steinmetz: yeah so I when I was in my after my second year in college I went on I got a year old pass and went around Europe and I bumped into a guy, again, it was valid in Morocco. So I went down to Morocco and I met a guy who just motorcycled across the Sahara and I thought, wow, that would be incredible. And so I started thinking about Africa and

03:29 - 03:29
Molly: it was

03:29 - 04:01
George Steinmetz: a very different time than now. I mean, there were certainly no cell phones, very few paved roads. There was no Al-Qaeda and it was just a big, it was a big unknown. And I, when I went there, I ended up learning, I had to learn French and some Swahili and Arabic to get around. It was, I got a tour. I had very little money. And so that was why I was hitchhiking. And that put me in very close proximity with the whole spectrum of people I'd never known before, like everything from tribal people to missionaries to

04:02 - 04:04
George Steinmetz: drug smugglers, the whole spectrum of humanity.

04:05 - 04:14
Molly: Well, glad you survived that. Sounds like a great adventure for a college graduate. Who were some of the photographers who inspired you in the beginning of your career?

04:14 - 04:28
George Steinmetz: You know, I was very self-taught, Molly. I didn't know really anything about photography. And I just thought I would see like exciting stuff. And so I bought a camera, used camera for my brother in a lot of film.

04:28 - 04:29

Molly: Which camera was

04:29 - 04:39
George Steinmetz: it? Well, I actually bought a camera for my brother and then it broke before I was going to Europe. And so my friend from college had an Olympus and he lent me his OM-1.

04:39 - 04:42
Molly: Oh, the OM-1, I remember that, yeah.

04:42 - 05:11
George Steinmetz: He thought I would be able to get more use for it in Africa than he was at Stanford in Berlin. So he gave me his camera, he loaned it to me, it came back very dirty. And I was very self-taught. And this was a film. And so I made a lot of mistakes. I mean, I took a lot of bad pictures. And I mailed them back to my mother. And then she would send me, she'd send me to the little photo shop, hold the lamp shade and say, you know, roll 4, frame 7 out of focus.

05:12 - 05:14
George Steinmetz: Okay, that news like 2 months later.

05:15 - 05:19
Molly: That was the beginning of your relationship with really tough photo editors, huh?

05:20 - 05:48
George Steinmetz: Yeah. Well, you know, your mother, she always puts your, like in your kitchen, she puts your finger right up on the refrigerator. You can't always trust your mother as the arbiter of excellence in your creative endeavors, but she was devoted. And anyway, so that was how I got started, but it was kind of school of hard knocks in Africa. And I came back after about a year of travel and I was really anxious to see my pictures and I stayed up all night going through everything and it was incredibly depressing.

05:49 - 05:49
Molly: Oh, yeah.

05:49 - 06:13
George Steinmetz: When you see all this stuff, these amazing experience you had and you felt you'd looked at these amazing photos and out of focus and overexposed. I didn't know not to take pictures in the middle of the day. And with film, we're swirled now with digital, with film, you had to be, you know, you had to be very precise exposure and really careful about your, the color balance and stuff. And I didn't know what I was doing.

06:13 - 06:18
Molly: You were shooting in color. Were you shooting in Kodachrome or

something like that?

06:18 - 06:26
George Steinmetz: Yes, I was shooting Kodachrome 64. And some Ektachrome. Ektachrome was really pretty lousy at the time. It was very grainy and blue.

06:26 - 06:27
Speaker 5: So it was good to

06:27 - 06:32
Molly: get your mom involved because maybe she could send you some money for more film or more film, right?

06:33 - 06:49
George Steinmetz: Well, you couldn't buy a film. You couldn't buy that kind of film in Africa. You can get it processed there. So I had to mail it back to mom, you know, at the time, I mean, for Kodachrome, you can only get it processed in a few lives in the States and Europe and Japan. And you couldn't get it processed in other parts of

06:49 - 06:53
Speaker 5: the world. So you're kind of stuck in that regard.

06:53 - 07:06
Joe: I'm curious to know, George, like when you decided to do aerial shots, did you look at like photographers like Emmett Gowan, any of the aerial guys? I mean, what drew you to doing the aerial work?

07:07 - 07:35
George Steinmetz: I didn't, I was really kind of a, I mean, it was kind of a Forrest Gump sort of approach. I just kind of went out and kept running. And I didn't, I didn't, I, like I said, grew up with looking at it, National Geographic and things like that, but I wasn't really steeped in art photography. And for aerial photography, it was just kind of an instinctual thing. Like when I was traveling the hitchhiker, most of my rides were on tops of trucks. And I thought, well, wouldn't it be amazing if I could get up higher, if

07:35 - 08:00
George Steinmetz: I could see above the trees, if I could fly. And when I was in, like in Sudan, I would try to climb up like the water tower so I could see the plains. I always had this kind of instinct to go up. And later on, I started like my first when I was trying to build my first portfolio to get magazine jobs. I went and I was doing a strange sheep ranching a self assigned project and I thought I should get up in a plane. So I found somebody with a Cessna who would take me flying

08:00 - 08:08

George Steinmetz: for gas money. And that was the most exciting part of my, you know, my month in the field was being up on the plane, which is something that was just kind of instinctual and wanted to

08:08 - 08:11
Speaker 5: get up. And it's still my in-state pre-arms.

08:11 - 08:17
Molly: Yeah. Tell us about, like I mentioned, your flying machine. Did it have a name?

08:18 - 08:55
George Steinmetz: Well, I mean, in the late nineties, I got into motorized paragliding. And I got my first assignment from National Geographic when I was 29. And by my mid thirties, I was starting to get some traction there and so I proposed a story on the Sahara and it was basically that kind of my hitchhiker's fantasy that I could fly over the Sahara And there were no aircraft to hire in Niger and Chad. So I had to figure out how to do that on my own. And the only thing I could think of that I could bring into

08:55 - 09:07
George Steinmetz: the country without having a customs nightmare and a pilot's license was a motorized paraglider, which was a newfangled contraction at the time. And I learned how to fly and I bought 1 and it worked.

09:08 - 09:22
Molly: Well, I know you've told me about a few mishaps, interesting extra adventures you've had because the paraglider went down in unexpected places, right? In the early days.

09:23 - 09:59
George Steinmetz: Yeah, well, the motorized paraglider, it's a glider. So it's made to fly with the motor off. I mean, if the motor fails, people think that you're flying in the motor quits, it's a disaster, but you're thinking from a jet perspective. And with the paraglider, you only fly it about 25 miles an hour, and the motor weighs less than 100 pounds. So when you come in for an emergency landing or a non-motor off landing, you're coming in pretty light and slow. And so unless you land in really hazardous terrain, you hit a tree or you're down in

09:59 - 10:26
George Steinmetz: water or volcanic soil or something, you know, volcanic landscape, you just get, you might get a little banged up. So it just, it seems a lot more, it seems a lot more dangerous than it is. And the motors, especially in the late 90s, were not very reliable. So I had a lot of motor stops typically when you land you turn the motor off before you land because you don't want the

propeller the Parallel lines to come down on the prop because the motors in your back, you know You run to take off and land with this

10:26 - 10:51
George Steinmetz: thing and with 10 liters of fuel. I could fly for about 2 hours. It looks like, I call it motorized lawn chair, but it looks kind of like a mixture of a lawn chair and a leaf blower with a paracute wing, which sounds kind of kooky. But for what I wanted to fly, it was ideal because I could take off the land almost anywhere and the whole thing would fit in the back of a car, like a jeep, like a Land Rover.

10:51 - 10:58
Molly: That's pretty amazing. But you have ended up in some people's backyards, haven't you, that you weren't intending to land in?

10:59 - 11:26
George Steinmetz: Well, not years, but you know, in the desert when you go down, I would always fly with a pro pilot, not with me, but on the trip. And I would have a radio contact. Usually, often they would be flying at the same time in a different aircraft. So if I went down, I could get on the radio and say, you know, Allah or Mohammed, you know, I'm here. He's my GPS coordinator. 3 miles west of camp behind the big dune. And they would come and pick me up in

11:26 - 11:30
Molly: the car. That's great. That's a good situation. Much better than hitchhiking.

11:31 - 11:34
Joe: I mean, yeah, those things are, I just know John Denver died in 1 of those.

11:35 - 11:40
George Steinmetz: John Denver died in a small, in a light plane, like a scramble plane.

11:40 - 11:40
Joe: Oh, okay.

11:40 - 11:40
George Steinmetz: I saw

11:40 - 11:41
Joe: it for some reason.

11:41 - 11:44
George Steinmetz: And I think you're not in anything. Like it's a strap-on.

11:45 – 11:45
Molly: You have

11:45 – 12:15
George Steinmetz: a backpack motor and the harness kind of brings and holds everything together. It holds the wing which is overhead. The wings are parachute style wing. And so basically what you do is you lay the paraglider, the wing out behind you and you run into the wind. And as you run forward, the wing pops up and then you have the motor is idling and then you you jam in the throttle which is in your hand and you have about 100 pounds of thrust and as you run forward you slowly take off and you can it's kind of

12:15 – 12:31
George Steinmetz: like like a kayak and you can steer with your butt like you by leaning or crossing your legs, you can steer, but you have lines that go up, and you look kind of like a puppeteer. You can pull on the right line, and it slows the right wing down, so the left goes forward, and you turn to the right, and you do the left, and you do the left.

12:31 – 12:34
Molly: It really is like being like the like the Wright brothers

12:34 – 13:05
Joe: in a way. How did you like I'm what I was fascinated with looking at all your the early work especially with film is we don't usually talk about like my new show on this show but what were your settings like how are you photographing I mean these things are like tack sharp III got the you know the digital I mean, I'm assuming you're doing digital, which is obviously faster and things. But when you were shooting film and doing these aerial shots, I mean, they're incredible to look at. And I almost thought, I mean, 1 of my

13:05 – 13:10
Joe: questions for you was were they, were they, are they the actual whole shot

13:10 – 13:10
George Steinmetz: or were they, you know,

13:10 – 13:25
Joe: when you do the big ones where they stitched together kind of like some astrophotographers do where they take several and then, you know, put them together. But I'm really fascinated by the technology on your back versus the technology to take the photo. Okay

13:27 – 13:58
George Steinmetz: with the glider you're always moving you know it flies at 30 miles an hour. And so you can't do stitching because

you're not from the same, each picture would be from a different position. So I did some panoramic work and I had special panoramic camera for that. I flew with, there was a Hasselblad X-Pan that would do basically super wide frames but it had a single frame shutter. When I was in it, I did some work in some big landscapes in Saudi Arabia where it's like these crazy doom patterns as far as you can see and

13:58 - 14:28
George Steinmetz: so I wanted to panorama and I did it that way. But you know, it is there's a lot of vibration because the motors right on your back. It's I had a very powerful motor. Mine was 3, 3 50 cc. So it's like having a 350 cc motorcycle strapped to your back. So a lot of vibration. It's pretty it's a little bit loud. It's not I mean, yeah, it looks in the tailpipe looks kind of like a motorcycle tailpipe. So you you have vibration. So I have to generally I would shoot it to 500 for the second.

14:28 - 15:01
George Steinmetz: And my when I was doing the film, I was using ISO 40 film lights, which include your chrome Belvia for most of that work. And so, you know it was really difficult that you could you could shoot tele from maybe like maybe 20 minutes after sunrise or until just before sunset and you could be sharp and there were some situations I wanted to shoot where at magic hour like after sunset and there was like I was in I'm flying in over an oil field in Saudi Arabia and there are big gas flares and big lights of

15:01 - 15:25
George Steinmetz: the refinery that I wanted to get. And so I got it kind of high, and then I killed the motor in flight so that I would glide. Once you turn the motor, it gets really quiet and it's really smooth. And so I was basically making, I was in approach emergency landing, but I got like 5 shots off before I had to set up for landing, because then that would reduce the vibration. And then it was a little tricky because I had to land in the dark and I land in the lights of the car. So I

15:25 - 15:33
George Steinmetz: had our vehicles from the for the expedition and kind of get together and light up the ground so I could see how to land, where to land.

15:33 - 15:35
Molly: Wow, that's a great story.

15:36 - 15:45
Joe: You know, I would love to see a book of your contact sheets. Like I think that would be, or you were shooting slide though, right? So you weren't shooting C-41.

15:45 - 16:00
George Steinmetz: I was live film. And you're like most editors, I mean, Molly is my editor that you grab most. I, to be honest, no offense, but I don't think most editors don't really care how you get the picture. They just want the fricking picture. And it's like, I wouldn't say like, oh, like, you know, I had to, you wouldn't believe what I had to do to fix my carburetor in India. They don't care.

16:01 - 16:01
Molly: They just want to

16:01 - 16:03
George Steinmetz: take a picture. Maybe not while you're working

16:03 - 16:06
Molly: on a story, but now I want to hear those.

16:07 - 16:10
Joe: I thought Nat Geo thrived on those stories though, right?

16:10 - 16:38
George Steinmetz: Well, I mean, you want to talk about the shark that I was speaking about, but a lot of the stuff, I had all these technical problems with the aircraft. I'd be like in Mali and I'd burn up a motor and we had to like take a piston from 1 with a camshaft from another and get everything together and try and find a local machine shop who could fix it and welding the frame back together in Iran, and all these kind of mechanical technical problems. And with flight, I mean, you have a lot of things you're dealing

16:38 - 17:10
George Steinmetz: with, like, I have a, the wing is a, it's a paraglider wing, so it's an inflated wing. And so if you get into turbulence, it can collapse. And that can be fatal if you're low and you can't recover. And so you had to look at situations and think about what's the wind like. And there's something Like I was in North of Chad and there were sand storms and we only had so many so much fuel and water and I ended up going flying in the sandstorm. Otherwise, I wouldn't get the picture and flying in the sandstorm

17:10 - 17:20
George Steinmetz: with the paragliders a little bit kooky. But I found you could do it for the first hour of the morning. The wind was strong, but it was laminar. And so if you were careful, you could fly in that.

17:21 - 17:21
Joe: So like all

17:21 - 17:51

George Steinmetz: the Frenchier stuff there's no with this kind of aircraft there's no license available in the U.S. And the places I was flying they'd never seen it before so you just had to make your own safety, feel your own safety stuff. And so like I always had a pro pilot with me to say, like, is this reasonable? Is this a good place to fly? Can you fix this? I flew over water, which is not advisable because if you go down, you have basically, you have like an anchor strapped your back and the equivalent of like a fishing

17:51 – 18:19
George Steinmetz: net overhead and you're in water you're gonna you're in a sink with you know you're gonna get you're drown really quick but I did that I got 1 of the port at Wales in Baja California So I had my pro pilot friend in a Zodiac trailing me. And hopefully he was like paying attention because he had the noise of the motor of the Zodiac. But I actually went down in the way over the whales and he got to me and pulled me out of the water before I sank. You just had to figure this stuff out.

18:21 – 18:27
George Steinmetz: You say, okay, well, this is reasonable if we do this and this and this, and we're just not going to fly today because it's too crazy.

18:27 – 18:49
Molly: Well, it's great to know that you have this safety aspect in your mind all along. I mean, that's, you know, is very focused on safety with the photographers. Usually if they know that they're taking big risks. And now of course it's become a multi national business to provide security and stuff for photographers, it's

18:50 – 18:57
Joe: really changed. Did you ever question why like on his expense sheet, it was like $800 for a lens hood, you know, like because it was a part for

18:57 – 18:59
Molly: the... No, you

18:59 – 19:01
Joe: know, I didn't really...

19:02 – 19:03
Molly: There wasn't too much question

19:03 – 19:04
Joe: with the budgets.

19:04 – 19:04
Molly: It was actually for

19:04 – 19:05
Joe: a piston, you

19:05 – 19:12
Molly: know, a piston. But yeah, I do remember that there were some drone losses when we were working together.

19:13 – 19:24
Joe: George, so out of like, How many rolls would you shoot? I mean, I'm curious to know what the success rate per roll was. Like, was it because you were just like pop, pop, pop, pop, I guess.

19:24 – 19:51
George Steinmetz: Yeah. Well, yeah, I would try for flying. There's no place to put anything. It's not like, you know, you put it like in the little glove box or something. I was the freaking glove box. So you have, I had 1 body that, with the panorama would have that's the, if I had a separate camera, I would stuff that inside my flight vest, like, you know, in 1 side of my chest, it's my chest. And sometimes I would carry an extra lens and I want to do something wacky, like use a fisheye lens to get my legs

19:51 – 20:20
George Steinmetz: in the picture or something. But generally it was like 1 body, 1 lens, sometimes 2 lenses. And I could, with film, I could carry about 8 rolls of film in a flight and that's actually quite a bit of, you're only shooting for an hour and a half, so that's actually quite a bit of film. And yeah, the exposure is constantly changing. You have to put your hand out so you could look at the back of your hand to see the brightest of the light on something that was kind of ground colored. And, and for focus, I

20:20 – 20:28
George Steinmetz: would take the, this is a lot of vibration, I would actually take the focus, I would get things in focus, and I put a piece of tape on the focus screen. So it was sharp.

20:28 – 20:29
Molly: That's a good trick.

20:30 – 20:56
George Steinmetz: That's a little dangerous if you get it wrong, the whole shoot's bad, but I would just double check the focus. And so you have little things like that to make stuff work. A lot of my craft was actually kind of deep was like the motorcycle maintenance. It was like getting the carburetor to work and I'm asking for pillars and all these little things and most of my gear was made in Europe so I had to stock all these weird little parts and have people who would fix it and eventually fix it myself.

20:58 - 21:31
Molly: I'm going to segue a little bit from tech to 1 thing that I think emerging photographers don't understand is the amount of research that it takes to do these kind of National Geographic stories or this kind of book. Can you give us a little window into that? Because I know that it took a tremendous amount of research to do the book, to find these places, and also just contacting people and getting permission. Permission was huge in those situations as well, wasn't it, George?

21:33 - 22:09
George Steinmetz: Well, yes, sometimes it was sometimes easier to get forgiveness than permission. And so for some situations, you have to decide when you're going in how you're gonna play that. And so like I flew in Iran, for example, after the revolution. I mean, I was the first foreigner to fly private aircraft in Iran since the Iranian Revolution. And at that time, the US invaded both Iraq and Afghanistan, so it was really difficult. But I decided in that country, I would have to have permission to fly. It was just too politically dangerous for me if I was to

22:09 - 22:13
George Steinmetz: get arrested for spying, which I did. I got arrested 3 times for spying in Iran.

22:13 - 22:16
Molly: But I had- 3 times for spying in Iran?

22:16 - 22:26
George Steinmetz: Well, I was detained because they wanted to check my papers and they would put me in a place like if you try to run they would shoot you but they weren't I wasn't in jail but I was like under our guard. You were being detained.

22:26 - 22:47
Joe: Yeah but what did they say about your your type of photography? I mean that's you know of course all these countries accused photojournalism of spying, right? But I mean, you're doing overhead stuff. If you catch a tank movement or something like that, I mean, that's pretty hairy. What do they think of the work? Did they ever say anything?

22:49 - 23:19
George Steinmetz: Well, 1 of the keys is you have to have local Confederates. And and and I found this everywhere. I mean, you wherever you go, you have to have local people who who believe in what you're trying to do, who can act as an intermediary, keep things safe. And in Iran, I found this wonderful crew who supported me. They saw when I would go up flying that I was basically risking my neck to

photograph their country. And I would show them the pictures and they say, wow, this is amazing. This guy's like, you know, this crazy 4

23:19 – 23:42
George Steinmetz: and he's risking his life to capture the beauty of our country. We've never seen it before. And so they become your team. And so we'd be driving along and they would, you know, be coming up to like a Ruben Shinraigard's checkpoint. And these guys would start putting the soundtrack of Mission Impossible on the car radio. Mission Impossible. That's what they called it. There's a version of it that was translated into Farsi and they love Mission Impossible.

23:43 – 23:43
Molly: Oh, wow.

23:43 – 23:54
George Steinmetz: And so they were like, They were on my side. And actually, when the final arrest order came out for me, they helped me get out of the country in 24 hours because they really believed in what I was trying to do.

23:54 – 24:00
Molly: Oh, so you did have an arrest warrant and you are a fugitive from Iran. Is that what you're saying?

24:00 – 24:18
George Steinmetz: Well, at the end, yeah, at the end, they finally, it was just became too much for them. Because the last time I was detained, I was on a few kilometers from the Afghan border. And the US forces were a few kilometers away. And they had some guy who told them that I had jumped out of a plane with my parachute.

24:19 – 24:20
Molly: Oh boy.

24:20 – 24:42
George Steinmetz: And actually turned out there was an archeological site that was in the desert right near the border. And I was out and photographed that. And I landed there and I picked up a piece of it and it had never been excavated. I picked up a couple of pieces of pottery to try and figure out what age it was. And I came back and they thought I was a spy and said, no, but look at this pottery. It's like, you know, it's like 2000 years old. And they realized that, you know, so you have people who understand

24:42 – 24:46
George Steinmetz: what you're doing, and then you have the crazy, the radicals who are trying to put you in jail.

24:47 – 24:52

Molly: Okay, but you're also feeling their archaeological artifacts now.

24:52 – 25:03
George Steinmetz: I mean, I didn't see them. I was just trying to show them what it was. It was like proof. It's like, you know, these are little broke pieces of pottery. And it's like, oh, how do you date it? What dynasty is it? I thought I could show it to a scientist and you'd see me help me identify it.

25:03 – 25:12
Molly: No, that's cool. And it also shows just your endless, massive curiosity, which is how you got to where you are.

25:13 – 25:27
George Steinmetz: That's right, Molly. I knew it didn't happen on that site. Like I'd done my research, I looked at the work of the great Swiss photographer, Georg Gerstner, and Gerstner had been down there during the regime of the Shah and was the last person to photograph Iran from the air. Was that

25:27 – 25:29
Molly: in the 70s? Is that when that was?

25:30 – 25:31
George Steinmetz: Yeah, he was there in the mid

25:31 – 25:31
Molly: 70s.

25:32 – 25:48
George Steinmetz: Yeah. And so I went through his book and I thought, ooh, these places are really cool. And this, you know, there hasn't been development in this area that will probably be intact. That'd be interesting to see. And it was exactly as it was when Gerstler was there like 30 years earlier, but the Iranian, the local Reinians didn't even know about it. They had forgotten about it.

25:48 – 25:49
Molly: Right, wow.

25:49 – 25:58
George Steinmetz: So you do, you know, and I tried to, when I was in the regional capital, I tried to find the archaeologist. I went with a little piece of the pottery, the archaeologist, he didn't know anything about the site.

25:59 – 26:38
Molly: That's wild. Yeah, I guess, you know, when you're also when you're living through that kind of crazy tumult, it's not necessarily

at the top of your mind, your history, unfortunately. So the latest book, I remember working with you on a grant to fund the original part of the, and the amount of information that you had gathered was extraordinary. I think at the time we were working on the fishing part, the global fishing, And I just, because we, you know, we're at a university and stuff, I would love to have you give a little insight into the

26:38 - 26:56
Molly: type of research that you have to do to come up with a pitch sort of and a book of this scope. Like I remember you were working with a particular nonprofit group and it is such a massive undertaking. Can you give us a little window into that?

26:56 - 27:25
George Steinmetz: Yeah, well, when I started, I understand fish as working on a project about the global food supply. When I was in China, I went along the coast and I saw that basically it was all fished out. And there were, it's fine, the East China Sea, you're on the coast, as far as you can see, it's fish farms. This looks like floating cities. And the waters are largely devoid of wild fish. And I realized, oh, I need to look at, you know, China was moving to the sea to feed itself because there wasn't enough food and land.

27:25 - 27:59
George Steinmetz: And I need to look at marine ecosystems. And so I started doing a little research, and I came across the work of a wonderful scientist in British Columbia, Daniel Pauley. And Pauley had written a paper where he found that the UNFAO was misguiding fisheries statistics because all their fisheries statistics were based on self-reporting by every country in the world. And I knew from my experience in Africa, like you go to a port in Africa, there's nobody sitting recording how much fish comes in every boat. There's just nobody there. And the Chinese, they were doing a lot

27:59 - 28:33
George Steinmetz: of illegal fishing, still are in other countries' waters or international waters, and those catches were not being recorded accurately. And so Polly, he sent scientists out to go and come up with the actual casutistics, and he pointed out areas to me where I should go, or where I could see evidence of oar fishing. He had contacts in each country who could help me get in to like fish factories and see what was going on. And so that was really a guidepost. And he explained to me, what species of the oar fish and which ones were good

28:33 - 28:54
George Steinmetz: in good shape. And so using that, I started digging further because with ocean, with marine work, it's really difficult. Some of these boats are go to sea for a year. And how do you get on

board? How do you document that? How do you photograph illegal fishing? It was really quite complicated. And so there's a lot of research time.

28:55 – 29:09
Molly: I remember the photographs of the refrigerated giant, huge ship, Chinese ship, where they were sort of catching and also packaging the fish all in 1 fell swoop, right?

29:09 – 29:40
George Steinmetz: I think the picture, actually you're thinking that the Chinese, a lot of Chinese boats do that. They do have these big motherships, but I think what you're referring to is actually in the US and there's a US boat called the Alaska Ocean. It goes after Pollock in Alaska. It's called the Alaska Ocean. It's the biggest boat in the US fleet. It's about 100 yards long and it's a massive catcher processor. It works off the coast of Oregon and Washington, it goes up to Alaska in different, you know, it varies. It follows the fish basically, but they

29:40 – 29:50
George Steinmetz: can, it's massive. They have a crew of about, oh, like 30 people below decks who continuously processing all the fish. This 1 boat catches all the fish that's from McDonald's.

29:52 – 29:54
Molly: That 1 boat is from McDonald's?

29:54 – 29:55
George Steinmetz: Yeah, all of

29:55 – 29:57
Molly: his fish. That's insane.

29:57 – 29:59
Joe: I haven't had a McFish sandwich in 20

29:59 – 30:03
Molly: years. I used to like that fish sandwich, Like when I

30:03 – 30:06
Joe: was in college. Well, I mean, the good thing, at least we know it's real fish.

30:06 – 30:07
Molly: Yeah, I mean,

30:07 – 30:27
George Steinmetz: they're fish. College is relatively new to the global fisheries. I mean, the fish have been around for a long time,

but people didn't fish them because it was kind of a junky, tasteless fish. But then people figured out, oh, but if you bread it with spices and you put it in the tartar sauce, people will like it.

30:27 - 30:29
Molly: Big bottle of tartar sauce, definitely.

30:30 - 31:02
George Steinmetz: And so what we're doing with fisheries, we're kind of going down the food chain. We're going after, you know, the most of the swordfish are gone. A lot of the Atlantic tuna, which is the finest, 1 of the finest sushi's in the world, they're heavily over fish. And so we started with huge appetite for fish. We started to go down the food chain. And now with salmon, we started to farm, we farm them in captivity. And it's really wild going to fish farms, fish farms, they're trying to turn the sandwich or carnivores into vegetarians, they're feeding

31:02 - 31:11
George Steinmetz: them mostly a soybean diet, but they have to put little, you know, kind of flavor bills, kind of like, you know, you have like nacho flavored Doritos. They try to make them kind of fish flavored soybean flakes.

31:11 - 31:23
Molly: So the fish will eat them. Wow, that is wild. So With all of this research and photography and stuff that you've done on the book, has it changed your diet? Has it changed what you want to eat?

31:26 - 31:57
George Steinmetz: Yes. I live in a... I worked on this project for 10 years. I have 3 kids in the house and I don't have control. I go out of the country for like half the year and I come back and it's like, what's this stuff? Like, what are you? And so I don't have complete control, but in my own choices. Yeah, I try to buy locally. I try to eat a little bit lower in the food chain. Like I think if I am not a vegetarian, but if I am going to eat meat, I would tend to

31:57 - 32:20
George Steinmetz: try to eat chicken over pork or steak. I try and buy locally. In the dairy products in our house, we use organic milk. But the point of my project, Molly, is not to tell people what to do about their, make their food choices. They're not like the Jehovah's Witness coming to your door to change your religion. That's not good. No, I know.

32:20 - 32:21
Molly: I know that.

32:21 - 32:27

Joe: It's interesting, because I see when we had Anthony Swal on here, he's doing the same thing with farms.

32:28 - 32:30
Molly: He did a film about organic farming, yeah.

32:30 - 32:44
Joe: And it seems like the alarm bells have gone off with a lot of photographers. Do you hope to get a message out to people with this new book?

32:45 - 33:22
George Steinmetz: Yes. To me, the main thing is that farming and agriculture is a major environmental issue and our daily choices have, cumulatively have significant impact. And it's kind of like voting, We all vote with a fork 3 times a day and and we have to be think I think we need to think more about how we're voting and There I mean, you know in terms of the How your food is produced you you buy, you know caged chickens or free range chickens and try I think people people start trying to understand that a little bit. I think

33:22 - 33:28
George Steinmetz: it'll make better choices. And my my book is trying to give people factual information so they can make up their own mind.

33:28 - 33:29
Molly: Good point.

33:29 - 33:30
Joe: Yeah, no,

33:30 - 33:49
Molly: as well. Yeah, that's what we do. We inform people. And hopefully they make good choices after that I mean as journalists as photographers and you had Michael Pollan as a collaborator right on the book and he's definitely and he can You can definitely put him in the advocacy category, right?

33:49 - 34:19
George Steinmetz: Well, I mean, Michael's, his landmark book with the On The Board Dilemma wasn't, it wasn't, you know, he eats meat, Michael eats meat. It just, but you just want to do it mindfully. You want to be aware of the impact of your decisions. And, you know, Michael points out, like if you look at the product and you can't pronounce the ingredients, then maybe you shouldn't be eating them. What are you putting in your body?

34:19 - 34:40
Molly: Very good point. And today, I mean, especially today, we're actually taping this on election day. It's like, yes, being mindful

about our choices is top in my mind too. So what's the toughest part of sustaining a career for 40 years, George?

34:42 - 35:20
George Steinmetz: Well, I mean, Molly, it's really, It's the same struggle every day. You have to get up and make things happen. When I was a young punk photographer, the phone didn't ring. You have to make it happen. You have to decide what's important and you have to be disciplined and go out and make something out of every day. And I remember, you know, early days of photography, the phone wasn't ringing. I had a, finally I got an assignment and 1 of my doofus roommates gave me the message for 3 days and the assignment went away and I

35:20 - 35:46
George Steinmetz: went, oh, I gotta get a phone machine. You have to solve problems and you have to, but you have to come up with ideas and have belief in your ideas. My food project, I got funding from magazines for the beginning of it. And then towards the end, there were a lot of important things I wanted to photograph. I couldn't find funding for it. I had to go out and do it on my own. I went to India 3 times. India is the most populous country in the world. And I didn't see a way I could find

35:46 - 35:59
George Steinmetz: a US or a publication with money to send me to India to photograph India's food supply. I didn't see how to craft that as a story. And so I said, well, I have to do that. I'm just going to go.

36:00 - 36:00
Molly: Right.

36:01 - 36:08
George Steinmetz: I went to Africa. I said, Well, I got to go in. And every day you have to get up and yeah make it happen.

36:08 - 36:34
Molly: And then hope that you could sell a piece of that story along the way to keep on funding yourself so a lot of. Of working for 40 years doing 20 articles, 25 articles for National Geographic, for GEO, you know, you're still self-funding. And that's a part of the crazy unsustainable part of being a photographer these days, isn't it?

36:35 - 37:05
George Steinmetz: Yeah, the industry has got a lot more, it's under a lot of stress. I mean, most of my work in my career was funded by magazines. I never worked much for newspapers, or recently. And so it's, but the magazine business is really, it's evaporating. And I mean, when I started at National Geographic in the late 80s, their circulation was 11 and a half million. Now it's probably about a

little more than a tenth of that.

37:07 - 37:10
Molly: I think it might be around a million, right? It's not, it's not like

37:10 - 37:42
George Steinmetz: around there. I haven't looked at it, but it's below 2. And even back when they were at their high water point, at $11.5 million, they made most of their money out of advertising. And there's very little high paying advertising in the paper product. And so they just can't, their budgets are really atrophy. And it still costs real money to go out there. If you want to go, let's say, do marine work, I mean, dive boats cost thousands of dollars a day. Right. And it's like, oh, it's murky water. It's too choppy. It's whatever. You still have

37:42 - 37:45
George Steinmetz: those kinds of problems. The fish are not cooperating. And they don't care about your problems.

37:46 - 38:02
Molly: The fish don't care. No. I know. Well, Etnetgeo, did you have a particular mentor there in the beginning? I was wondering, like, I know I've heard the Gilka stories about how tough he was on all of the photographers when they were getting started there.

38:02 - 38:13
George Steinmetz: Yeah, I remember Bob Gumpke was the director of photography when I first tried to get work there and he used to have a sign in his door that said, please wipe your knees before entering.

38:14 - 38:17
Molly: Oh my God. Seriously? He had that sign?

38:17 - 38:33
Joe: There was no, it's pretty heinous. I have a friend whose father was a Baltimore photographer that had the same. It was very, yeah, it was very masculine. Like he had it on a stool though. So

38:33 - 38:45
Molly: yeah, no, I mean, that has gotten into some trouble for its toxic masculinity. We do know that. But George is a guy so He didn't.

38:46 - 39:12
George Steinmetz: Well, I mean, there were no, but I mean, there were there were women working for the for the magazine then there weren't that many. But there were it wasn't like, I don't know. I mean, I didn't you know, I didn't it's hard for me to speak to that side of it because it wasn't my personal experience. But it wasn't I wouldn't see

Gilke's anti female was just it was just very he was kind of a gruff guy, that once you were in, you were in, and he would really take care of his people. But it was

39:12 – 39:14
George Steinmetz: a very high bar to get over.

39:14 – 39:44
Molly: Right. Yeah, so once you were in, you were in. So some of the images in the book, do you want to talk about any 1 of them individually? I mean, the cover image, the image of the tractors all riding in formation is just mind blowing. It's like, you didn't get an opportunity to direct them from above. Did you? That's just something that you saw that was happening and you made an effort to capture that?

39:45 – 39:52
George Steinmetz: No, and actually that was that's an arranged photo. And I'm a very transparent guy, Molly. I don't.

39:53 – 40:02
Molly: Well, I just wondered because I was like, how the heck? So you said this would be a really cool photo. So you asked them if they would drive in formation?

40:02 – 40:37
George Steinmetz: Well, I did a lot of research on food and I'd seen pictures like that over the years and they were just really powerful to see that many combines together. And in Brazil, they have these massive farms, some of the largest in the world. I mean, they're 30, 000 hectares. A hectare is 100 meters by 100 meters. So that's like, you know, like that's hundreds, you know, hundreds of square kilometers, massive farms. And when they harvest, they bring in, they'll have as many as 20 combines in harvesting at once. But it's typically, it's not very efficient to

40:37 – 40:50
George Steinmetz: farm like in 1 massive, like a V formation, like I photographed. But at the end of the harvest, when they're feeling good, they say, oh, let's, we're gonna kind of the last day, let's kind of do a last hurrah photo, we'll get everybody together and we'll do the last field together. We'll do that.

40:50 – 40:52
Molly: Okay, like a celebratory.

40:53 – 40:58
George Steinmetz: Yeah, it's kind of thing. They'll do it at the end when you know most of the harvest is all done and it's just kind

40:58 - 41:02
Molly: of like when the blue angels fly over the Naval Academy.

41:02 - 41:29
George Steinmetz: Yeah, and they like the photo because it makes them feel like, you know, they're like the, you know, we're the biggest dog in the block. It's the thing. And so I've seen these photos taken and I tried to recreate that in real situations. Like I went around with the biggest harvesting crew in the US and they go from Texas in the spring to Saskatchewan in the fall with 100 combines. But the most they ever had in 1 place was 12 combines. And I went out there and they only use like 4 or 5 in a team

41:29 - 41:48
George Steinmetz: and I really couldn't get the picture. And so I had my fixture in Brazil start calling around and she contacted the biggest soybean grower in Brazil and they had about a dozen farms that were each at 30, 000 hectares. And I asked if I could take that picture at the end of their harvest

41:48 - 41:48
Molly: and

41:48 - 42:00
George Steinmetz: they identified a farm for me and they said they could get about 12 combines together and I said 12 I see pictures of 20 I want 20 you are not so they agreed to put 20. Geez

42:00 - 42:02
Molly: what a prima donna.

42:02 - 42:19
George Steinmetz: No I said look and anyway and so we part of this business is you have to be able to sell yourself to people, you know, and make them excited about your obsession. I see like I've been floored from all over the world. You guys are the biggest in Brazil, the biggest in the world. I'd like to illustrate that.

42:19 - 42:19
Molly: Right.

42:19 - 42:49
George Steinmetz: And so they got the fever and they agreed to put 20 combines together. And so I flew to Brazil on the way down, I got COVID in the plane. Oh, no. I had 20 combines waiting for me. Oh my God. So I packed myself together for a day in a hotel. We drove out there and they gave me 2 days to do it because we weren't sure about the weather. It was cloudy, you know? And so I had like 20 combines and each combine, each of our 2 combines needs a semi-trailer to offload. So we had

42:49 – 42:52
George Steinmetz: about, I know like 30 or 40 people out there.

42:52 – 42:56
Molly: Well, the production team and you didn't really have to pay for that production.

42:56 – 43:19
George Steinmetz: They were great. It was really nice. I actually felt really I felt really indebted to them. So I I made a nice big print for their office as a thank you. They didn't ask me, but I thought, look, the least I can do. And it was really amazing to me, Molly, because when I started that project, like 11 years ago, my first week in the field, I was thrown in jail in Garden City, Kansas. I got arrested for flying over a cattle feedlot with my.

43:19 – 43:24
Molly: In Kansas, in your own country, you were, you were arrested when you first. I was

43:24 – 43:47
George Steinmetz: on a time for Nat Geo. I got arrested by the sheriff and I showed him my Nat Geo ID. I get my editor's phone number and I explained what I was doing and is like, boy, you're going to jail. And anyway, so to go from that, like getting arrested in Kansas to like having, you know, 30 people on call in Brazil, tell me photographing, it was like, wow, this is like, I like this country. Yeah.

43:48 – 43:54
Molly: Well, yeah. So what's next? You're going to start making films now that you're used to working with crews that big or?

43:55 – 44:28
George Steinmetz: No, actually, I mean, I don't really like, to be honest, I find it's much more fun to find found pictures and to go out and that was something that I especially really wanted. I thought it was it was valid because I'd see it had been done before and it was a great way to to illustrate what they're doing to scale about what they're doing there. I didn't, but now I don't, I don't, I like working small and usually it's just me and sometimes if it's a foreign country, I'll have somebody for a language and access help.

44:28 – 44:29
Speaker 5: I'd like

44:29 – 44:56
George Steinmetz: to be really small and flexible. And now with drones, like what the pair got, I used to have to have in the Sarah, we had 3 cars and like maybe like 8 people. And now I can do

everything with 1 car and 1 person to help me. And I like to be really small. And film is great. But I'm a photographer. I don't know. Film to me is a different way of thinking. And there are some people who have transitioned like, you know, Jimmy Chin from still photography, doing video, right? But for me, it's like, I'm

44:56 - 45:06
George Steinmetz: a photographer. I don't think in term filmically. I might think Centauran, but I don't understand like how to put a story together and getting the talking head.

45:06 - 45:07
Molly: The motion world.

45:08 - 45:09
George Steinmetz: Yeah. The other thinking

45:12 - 45:45
Molly: and I know what I know and I'm, I am what I am. And you're continuing to do it. Well, thank you, George. Because I was looking at the way people talk about their cultural diet or the things that inspire them. And I was wondering if there's anything that you've stumbled across in the past couple weeks that has inspired you that you would say, hey, you got to go see this, do this, experience this. Sort of like the things that you look at or ingest for your mind to keep your creativity working over time.

45:45 - 46:12
George Steinmetz: So you say, like, where do I look for inspiration? Yeah. I read a lot. And my best inspiration is when I go out and walk my dog in the woods, and I kind of get unplugged. And I just kind of process all the stuff that happened in the day. And I try to be a bit of a contrarian and do what other people aren't doing. And it's better I try not to follow the news and try to get ahead of it. And so, yeah, I have a new project I want to work on. I don't really

46:12 - 46:15
George Steinmetz: want to talk about it right now. But so that I

46:15 - 46:17
Molly: can give us a little bit.

46:18 - 46:19
George Steinmetz: No, I'm not going to do that.

46:20 - 46:20
Molly: I have a new project I'm

46:20 - 46:54
George Steinmetz: going to work on. I'm going to India, I think in

January, to do some work on that. But I'm concerned about the footprint of humanity on our planet. And it's something that I've been seeing as I traveled. I see sometimes I go back to the same place and I see how much things have changed. And there's a tremendous impact of humanity on the planet. In our world today, there are like the total weight, the total biomass of the domestic chicken is greater than all the wild birds in the world put together. I mean, that the imprint

46:54 - 47:15
George Steinmetz: of like, you know, the impact that humans have had on our planet. And so I want to do more work on that theme. I think we're all gonna clap on our daily lives and we're not thinking kind of about the big picture. And that's what I tried to do with my book on food, my book before that about the human planet and looking at how humans are affecting

47:17 - 47:18
Speaker 5: our suffering earth.

47:19 - 47:27
Molly: Yes, absolutely. Important topic. Thanks so much, George. We, I really enjoyed talking to you. It's nice seeing you again.

47:27 - 47:28
George Steinmetz: Thank you. Nice to see you too. Yeah.

47:28 - 47:29
Joe: Thanks for being on.

47:38 - 47:52
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