**Wednesday, May 29, 2024 / Chasing the storm**

**[HALF SECOND OF SILENCE]**

**[BILLBOARD]**

SCORING IN <Rugged - APM>

AARON RIGSBY (storm chaser): Oh my god. Yeah. So we just had the busiest stretch of severe weather that I've ever had in my 14 years of storm chasing. And, like, that's saying something, because it was like someone flipped on a light switch, just forgot to turn it off.

MUSIC BUMP

AARON: Leading up to the year, March and February were pretty slow, which doesn't seem like your typical tornado months, but they are. After April 26th, there was a big tornado outbreak in Nebraska and Iowa with over 100 tornado reports...

*<*[*CLIP*](https://www.youtube.com/watch?v=5WIEg1XrdWk)*> Whole trees in the air! Whole trees! Oh no, it’s hitting town. Oh my god…*

AARON: I saw 12 plus tornadoes that day on three different storms because they were so clustered together. And that was by far the longest duration chase and the most tornadoes I've seen in one day…

DAVID PIERCE (host): Tornado season is here, and it’s changing. Coming up on *Today, Explained*, how a professional storm chaser is making do in an increasingly unpredictable climate.

**[THEME]**

*<BUMPER> 4 Note Theme\_Short\_Atlantic*

DAVID: It’s *Today, Explained*. I’m David Pierce, filling in as host today. Aaron Rigsby is a professional storm chaser.

AARON: There's a lot of different storm chasers out there. A lot of them are, you know, what we consider like tornado chasers, where they're just tornadoes and supercell thunderstorms all the time, versus me, where I'm a bit of a journalist and a storm chaser. And I kind of combine those two worlds together.

DAVID: Aaron has been chasing storms for 14 years. Last week, as storms were hitting the midwest and south, Aaron was in Iowa, where he had a close call with one of the massive tornadoes…

*<*[*CLIP*](https://x.com/accuweather/status/1793272539600343138)*> Aaron Rigsby, via Accuweather: Oh my god. What a monster. What a monster! What the… wow!*

AARON:~~,~~ It's a methodic, calculated technique that you do when you get close to these tornadoes. You know, we have to pick our moment to pounce because these storms are moving very quickly off to the northeast at 50 miles an hour. And we have radar software and GPS locations so we can see our exact location to where the tornado is going to be tracking both visually and on radar. And when we got that moment where we could see that it was going to pass off to our east, and we had an east road and multiple escape options, that's when we can allow ourselves to get those up close and personal tornado shots, which is very key if you want to make this a career, because we have cell phones everywhere and people, you know, the general public can just stick out their cell phone, get a crazy video because they don't know what's going on. They don't know how much danger they're going to be in. But if you're a storm chaser with how saturated the market is, you've got to make your stuff stand out somehow. And it's not even, you know, necessarily just from the marketing aspect. It’s just if you, when you're up close and personal to such raw power and you can feel the atmosphere rumbling and you're capturing these images and really bringing to light the raw power of these events, there's just no other feeling like it that can be described.

DAVID: What are you measuring when you're out in the field? What is the sort of big picture kind of data you're trying to collect?

AARON: So mine's a little bit different than a lot of the scientists out there because I'm not a scientist. At the end of the day, I'm a journalist. So I'm out there capturing these images, capturing the raw power of these storms and the stories that come after it, whether that be with damage or just someone's personal experience. And there's a common misconception that we just, like, cheer on every single tornado, whether it charges through a town and does a bunch of damage. And that's not the case. These images of damage are just as important to capture afterwards as the tornado themselves, because I don't think that people can truly grasp what these tornadoes can do to the general public if they've never seen it before. And a lot of that footage of the tornadoes itself, how they behave when they impact these structures and when it's captured on camera, that can be used to study tornadoes and their effects on homes and hopefully build more tornado-resistant homes in the future and help improve a lot of these building codes that haven't been necessarily up to standard.

DAVID: How did you get started doing this? How does one become a storm chaser?

AARON: <laughs> Well, you pretty much give up any chance of a stable relationship, that's for sure…

DAVID: <laughs>

AARON: …because you're gone so much. <laughs> But you know that, in all seriousness, it's, you know, it's been a journey, man. You know, I basically, I turned my biggest fear into my biggest passion. And I just kind of realized at a young age that my brain wasn't wired to work 9 to 5 or, you know, work customer service. And so, in 2018, I was working a warehouse job at the time, at a distribution center, and I just absolutely hated it. And I just decided one day when I told my parents, I was like, hey mom and dad, I'm going to save a cushion and just live on the road and try and pursue this career, freelance that I have, that I know like nothing about business. And, you know, I owe a lot to where I am today to them, because they were so supportive of that decision. They're like, okay, like, sure, but like…

DAVID: Go run after tornadoes, what could go wrong? <laughs>

AARON: <laughs> Yeah. They're like, are you like, sure you want to do this? And I'm just like, I don't know. But I feel like I've just got to try. I saved up a cushion from my warehouse job, built a bed in the back of my car, and I hit the road. And, you know, I just decided to learn along the way. I've done work for Netflix, I do work for all major news networks, and some of my images and videos captured are some of the most iconic images and videos that you've seen to this day, which is incredible.

DAVID: That's, that's pretty cool. What is it about tornadoes for you?

AARON: So tornadoes are the perfect combination of something that can be the most beautiful but terrifying thing that you can see in your entire life. And the raw power and the the buildup and the anticipation of when you're putting a forecast together and watching it unfold in front of you, there's no other feeling like that in the world. And the thing about it, though, is that they are all so different. Like they they are all they always unfold differently. And, you know, it all goes down to the thrill of the hunt. But at the same time, you know, you're capturing a moment in history that's never going to happen again. You have such a limited amount of time to capture that moment and tell that story, and to be able to be a part of that and be able to do that and to be able to consistently learn so much from that, it just keeps me coming back, no matter how tired I get, and no matter how bad those those bust days burn, when you may have, like, missed the tornado of the day, or you just blew the forecast and you were completely out of position, all it takes is when you get that that one moment to capture and it just draws you right back in.

DAVID: Are there things to chase other than tornadoes? Like are there similar kind of communities around other extreme weather? Are you part of those communities?

AARON: So it's kind of the same community all around. The weather community in general is kind of, you know, it's a pretty niche circle, but a lot of people just chase tornadoes. We have tourists come from all over the world, from Europe, from New Zealand, Australia, you name it. They come over here and they're specifically after the tornadoes. But people like me, I'm obsessed with any type of weather. We chased a volcano in Iceland in 2022. We documented the eruption of that volcano, which was the most unbelievable trip of my life. I like chasing flash flooding, hurricanes. Hurricanes are my favorite thing to chase because they are just like, I don't know if I'm allowed to say this, butt-puckering adrenaline?

DAVID: Sure.

AARON: Okay, cool. I just, I didn't know if that was appropriate…

DAVID: <laughs>

AARON: …but yeah, like, butt-puckering adrenaline and there's just so many logistics and so much planning, so much anticipation that goes into it.

DAVID: Do you have a hurricane story that's kind of as, as seared in your brain as some of these tornado stories?

AARON: My, the, fun fact, the only story to this day where I thought I might be legit in trouble was from a hurricane, and it was from Hurricane Harvey, which hit Rockport, Texas in 2017.

SCORING IN <Calm After The Storm - APM>

AARON: Basically, long story short, with that, we took cover in a hotel. It was the first major hurricane landfall in over a decade, so it was new to my career at the time. My approach to hurricanes are a lot different since then because of the events that happened. But basically the hurricanes stalled like over and the most intense part of the winds, and it ripped off the fourth, third and second floor wall of the hotel that we were taking cover in.

*<*[*CLIP*](https://www.instagram.com/aaronrigsby/reel/CzgptyVOEUw/)*> Aaron Rigsby: A quick video update for everyone. Our hotel roof came off and the fourth floor is completely exposed. The eye is over us right now. Debris everywhere, roof totally gone, rooms exposed. Harvey is no joke.*

AARON: And it was just gutting the hotel from the inside out. And we all had to take cover at the bottom floor of the hotel and hope that the structure held up, because our cars were just far enough away to where we couldn't run and retreat to our cars and ride it out there because the winds were so bad and there was so much debris flying around everywhere. And then when we got into the eye of the hurricane, it was just a mass panic because the people taking shelter there were being evacuated to the school. But then we got word that the other school was destroyed. So it's just like, what's going to stop this one from getting destroyed? So we ended up just hoping that the other side of the hurricane was weaker, which it thankfully was, and the other wall held up. But at one point, the walls were shaking so violently that the toilet bowl water in the toilets were sloshing out of the bowls. And you could, like, lean up against the wall and feel the walls like flexing and shaking back and forth. But this is one of those instances where it was the ultimate dance of fear and beauty. Because when you walked out into the eye of the hurricane, you could look up and you could see the stars and Milky Way and the lightning illuminating the stadium effect of the hurricane.

SCORING OUT

DAVID: Wow. That's gotta be such a strange moment, because on the one hand, you've found this incredible, beautiful, powerful thing, and then on the other hand, you're seeing this unbelievable destruction. And I imagine that's a huge part of what you see on these things is like what's left in the aftermath of these storms. As someone who is chasing these storms and documenting this stuff and trying to sort of share this stuff with the world, how do you think about the destruction part of it and what gets left behind after these storms?

AARON: It never gets easier. And you know, I'm not claiming to be a first responder at all, but there's a lot of times when a big town or a big city is hit by a violent tornado or hurricane and people need help, the emergency services are so overwhelmed and you're the only hope for these people. And seconds matter. Now, and one of the craziest stories that I have to this day, and still one that sticks with me, that I, you know, have kind of issues with to this day was, last year Rolling Fork, Mississippi, got hit by a terrible tornado. The tornado rolled through town in the middle of the night, destroyed their fire department, destroyed their police station, and severely damaged their hospital, so their immediate resources were cut off. The nearest towns were 30 to 45 minutes away, so they had no resources, and the only thing that those people had as a shelter or help was storm chasers. And we literally were spending 45 minutes to an hour pulling people out of houses alive, injured. But like, you know, we were literally pulling people out of their homes, cutting them out with chainsaws with, that was provided from the neighbors. So, you know, there's a, that fine line of, you know, people looking poorly on storm chasers because it just appears that we're a bunch of adrenaline junkies, and that's not the case. We're humans at the end of the day. And when towns are hit, my camera is immediately dropped and I go into search and rescue, whether that be for 2 minutes or 2 hours. That's my number one priority. Video edited later, video later. After these people get the proper help that they need.

DAVID: Yeah. You've been doing this for, what, about half your life at this point, right?

AARON: Yeah, literally.

DAVID: Have you seen big changes in the storms themselves? Is it, is it a totally different prospect to be a storm chaser than it was ten years ago or 14 years ago?

AARON: I mean, there is no doubt about it that something is going on with the hurricanes. And, you know, no matter how you feel about climate change, global warming, whatever you want to call it, you know, you've got to acknowledge at some point that something weird is going on.

DAVID: What do you make of that? Are you thinking about what climate change is doing to all this stuff, and kind of how the life of a storm chaser is going to continue to change over time? Obviously, it seems like a lot of this stuff is shifting very quickly.

AARON: Yeah, absolutely. I mean, if this is the new normal and storms really are becoming more frequent, you know, it puts it into a whole different perspective because I have family along the Gulf Coast, these things start hitting on a personal level. I have to start messaging family that, hey, this is looking to be really bad. It's literally coming your way. Or I have friends that live in Fort Myers. When Hurricane Ian came onshore, I had to call them at five in the morning to tell them to evacuate. It hits on so many different levels, and, you know, it just wears on you mentally because you're just seeing constant years of death and destruction. And it sucks. But at the end of the day, seeing is believing. Why would I believe something if I haven't personally seen it? But that's where my job comes into play, where I'm capturing this stuff happening. Millions of people are seeing it, and it really is. I've had people message me where they're not necessarily saying that they believe in global warming and climate change now, but they're coming up to me and like, “yeah, things are weird. Like, this is bad. You've been seeing a lot of bad stuff the last few years, and I just never realized how bad these storms were until you started taking these pictures and video, and, you know, I saw them pop up online.”

DAVID: Yeah. Do you think you have another 14 years of this in you? Think you, you'll keep doing this?

AARON: Oh, absolutely. There's no doubt about it. I mean, I've already, I've already canned the whole, you know, eventually having a kid picture. That's just not for me.

DAVID: <laughs>

AARON: Marriage. God forbid.

SCORING IN <Nosey Parker - APM>

AARON: You know, this is my life, man. This is what I live for. You know, I can't stop. These storms, someone's gotta do it. And I'm willing to be that guy to do it. And there is just something about being able to capture historic moments on camera and get your name out there and tell your story. Especially just being a small town, farm land, Ohio kid. Like, there's no way I'm not going to do this for another 14 years.

SCORING BUMP

DAVID: That’s Aaron Rigsby. You can follow his adventures on all the social channels. And in fact, right after we finished recording, he had to pack up and hit the road to chase yet another storm.

After the break… all that weird weather people are noticing? What’s the deal with that?

**[BREAK]**

**[BUMPER]**

*<BUMPER> Descending theme - clarinet*

DAVID: I’m David Pierce, back with *Today, Explained*. Vox correspondent Umair Irfan has been tracking the very weird weather these last few days.

UMAIR IRFAN (Vox correspondent): We saw a huge outbreak of storms over Memorial Day weekend, particularly across southern states, places like Texas, Arkansas, Kansas and Alabama. These were massive storms that produced hail, 75 mile an hour winds, tornadoes. They've killed at least 23 people. They caused flash floods and power outages.

DAVID: Is this unusual for this time of year? I don't remember stormy Memorial Day as being a thing.

UMAIR: Generally, you know, summer disasters do happen. And, the destructive toll of them, though, is increasing because we've got more stuff that can get destroyed.

DAVID: Is it that it's more people in the path of these storms, or that the storms are taking new paths, or some of each?

UMAIR: There are parts of the country that have a historical precedent for seeing a lot of storms, particularly in the Great Plains states. This is an area that's often called Tornado Alley.

*<*[*CLIP*](https://www.youtube.com/watch?v=J6gKglWodrA)*> KSN TV: “When you think of Tornado Alley, Kansas or Nebraska might come to mind.”*

*“But tornadoes are becoming more common in the Southeastern part of the country.”*

UMAIR: We're starting to see some shifts in rainfall patterns and severe weather patterns and even in where we tend to expect to see tornadoes over time. And so there are people that are encountering this kind of severe weather for the first time, and they're not as familiar with how to forecast it, prepare for it, and then respond to it.

DAVID: Yeah, I have to say, personally, I'm in Northern Virginia, just outside of D.C., and we had a tornado watch on Monday and my wife and I realized we've never had the, like, ‘what do we do in a tornado’ conversation. Because we've just never had to think about it before.

UMAIR: Yeah, that's a real “tell me you're not from the Midwest without telling me you’re not from the Midwest” type statement.

DAVID: <laughs>

UMAIR: I grew up in Illinois. We had tornado drills in school where you would grab a textbook, put it over your head, and kneel in front of your locker.

*<*[*CLIP*](https://www.youtube.com/watch?v=oJdpT2rSAuU)*> Fox 2 St. Louis: “Severe weather alert, please take cover.”*

*Students filed out of classrooms and into hallways, assuming a protective position on hands and knees.*

UMAIR: Get to the basement, get into a door frame. Don't be outside, get inside, type of situations on how to deal with this. But as you note, when they start hitting areas where people are unfamiliar, that's where the destructive potential can be greater. That's where they can actually have a greater human toll.

DAVID: Yeah. So what are some of the places that we've seen even this early in the season, that are getting hit by these storms that haven't been in the past? What are some of the new places we've seen?

UMAIR: Well, generally they tend to be moving a little bit further east. So away from states like Kansas and Nebraska and then moving towards places like Missouri and then, even further to like Kentucky and Tennessee and in other parts of the South.

*<*[*CLIP*](https://www.youtube.com/watch?v=duSMl1fGEzQ)*> Fox 32 Chicago: Across southern states and into the Great Plains, the deadly storms leaving a trail of destruction, killing nearly two dozen people in Oklahoma, Arkansas and Texas over the holiday weekend.*

UMAIR: Those places have gotten tornadoes before. It's just not as frequently as it did in the middle of the country. And the greater frequency means that there's more destruction from the storms that do occur.

*<*[*CLIP*](https://www.youtube.com/watch?v=NdcqYFYNqJ4)*> ABC World News: You can see the sheer force of this tornado right behind me. I mean the metal coming completely down from the gas station, cars flipped over and then landing on top of each other.*

UMAIR: We don't get a lot of warning when it comes to tornadoes. They're not like hurricanes that we can see days in advance. Usually we get maybe a few minutes if we're lucky. And so without that lead time, that means that there is less that people can actually do to take precautions. And a lot of people are often caught exposed.

DAVID: Is this a climate change story?

UMAIR: We've seen a couple different things. That one is that we're seeing more tornadoes cluster, rather than having them spread out more evenly through a season. We're seeing in many parts of the countries that we see a handful of storms spawn a lot more tornadoes. They're the ones that tend to be the breeding grounds for these kinds of events. And we don't exactly know why that's happening. There doesn't seem to be a very strong climate change signal. It's not simply a consequence of warming. But there may be another kind of human influence that we're having on this as well. And scientists are trying to tease that out.

DAVID: Are tornadoes the story of storm season so far this year? What other kinds of extreme weather are we seeing?

UMAIR: Well, it's hard to even define a storm season, given that we're starting to see extremes throughout the year.

SCORING IN <Ominous Tides - APM>

UMAIR: Earlier this year, California got walloped by those atmospheric rivers where you basically have this huge current of moist air moving in from Hawaii towards the West Coast, and that flooded huge parts of the West Coast.

*<*[*CLIP*](https://www.youtube.com/watch?v=NDiKbHcGMwg)*> CBS News: Millions across California remain under a state of emergency this morning after torrential rain brought widespread flooding to several cities and triggered mudslides.*

UMAIR: We're also starting to see extreme heat setting in in some parts of the U.S., but also in other parts of the world, we've seen heat waves in Mexico, in India, even in Finland already.

*<*[*CLIP*](https://www.youtube.com/watch?v=XsiothhA4-I)*> Bloomberg Television: For two weeks now, Karachi's 15 million residents have been baking in a heat wave. Temperatures in parts of Pakistan have been nudging 50 degrees Celsius. That's 122 degrees Fahrenheit.*

UMAIR: They're all in the northern hemisphere and summer hasn't even officially started yet. Drawing a hard line between when you see one type of disaster and another is getting harder. In fact, you see those lines starting to blur and many types of disasters starting to overlap. We're starting to see things like, you know, warmer winters leading to more rainfall rather than snow. That's causing flooding earlier in the spring, which can actually contribute to drought later in the season. And that can contribute to fire risk. So all these things start getting more interconnected and feeding into one another. And increasingly, as we're heading into this era of greater extremes, we're finding that one extreme can actually lay the groundwork for another. You know, last year, 2023 was the hottest year on record. And we saw that, you know, many of the world's oceans were at record warm temperatures. And the ocean still stayed pretty hot throughout the winter. And then this year, what we're expecting is that those warm waters are going to fuel more tropical storms, things like hurricanes, particularly in the Atlantic. In order for a hurricane to form, you need the surface water to be about 80°F or warmer. And so forecasters now expect that, according to some forecasts, that we will likely see the largest number of named storms on record in the Atlantic hurricane basin because we have so much hot water there.

SCORING OUT

DAVID: That sounds very much like a climate change story. Is that a climate change story?

UMAIR: In part. So, in terms of the total number of hurricanes, there doesn't seem to be an overall trend that we're seeing with temperature. But when it comes to some of the destructive aspects of hurricanes, specifically the water that they inundate the land with, we do see a pretty strong signal there. So the big ones are things like storm surge. So basically, the amount of water that a hurricane pushes inland, we're seeing storm surge is becoming more severe, reaching further inland, reaching higher water levels because the ocean itself is rising. And that is a direct consequence of climate change. As average temperatures goes up, the ocean itself physically expands due to thermal expansion. And then the ice caps are melting. So the ice that's on land is running off into the water. So there's more water in the ocean as well. So that's one aspect where you see climate change having a direct effect on the impact of hurricanes. The other is rainfall. So hurricanes you know, we judge hurricanes by wind speed. But again, the main destructive element from hurricanes is the water, the amount of flooding that they cause. And as average temperatures go up, as air gets warmer, air can hold onto more moisture. And so hotter air means the air can get more saturated with water. And so when rainfall events do occur, they dish out much more rain. So on those two metrics, we do see a pretty strong link between climate change and the severity of things like storm surge and rainfall.

DAVID: Is that cycle you're describing unstoppable? Is that compounding effect just going to keep compounding forever and ever? And is, are there ways to break that cycle?

UMAIR: There is still a lot of room for the climate system to absorb more heat and then manifest that in various ways that we see sometimes in these storms, but then also in just some of the more general things like heat waves. You know, heat waves are one of the most direct consequences that we can attribute to climate change. We see more intense, more frequent heat waves, but also moving into broader portions of the year, earlier in the season and later in the season as well. And so as average temperatures go up, the foundation upon which we've understood our climate is also moving, and that tends to have a whole bunch of ripple effects.

DAVID: So what should we be doing to prepare for this increase in storms of all kinds? And I mean, we both in the sort of you and me as regular people sense, but also we, as in the United States and the government and the people who study this and respond to it on these macro levels. What should we be doing?

UMAIR: I mean, in the very near and immediate term, I think have a good system of understanding warnings and forecasts, and then being able to have a plan in place for how to deal with it. Like, you talked about tornadoes. This might be a good time to start coming up with a tornado plan, and maybe even doing tornado drills with your family. But similarly, when we expect, you know, coastal flooding or we expect a hurricane, have a plan of escape, a plan of a go bag that maybe you can take with your family, a route or a place where you can retreat to if the water levels get too high. So start planning for those kinds of scenarios. In general, though, at a society level, we do see immense benefits when we try to invest in forecasting. That's been one of the big underrated improvements that we've seen that's been really beneficial in life saving. You know, about 20 or 30 years ago, we would only be able to see with decent resolution, how, where a hurricane was going about 24 hours in advance. We've now extended that lead time to 72 hours or more. So having three days of a route planning for the hurricane gives people plenty of time to get out of the way.

SCORING IN <Minimalist Electro - APM>

UMAIR: But then over the long term, you know, we need to invest in hardening our infrastructure, making buildings more resilient to these kinds of disasters. And then over the very long term, you know, we should also be thinking about ending our influence on the climate, zeroing out our carbon dioxide emissions so that we can limit warming that is contributing to many of the kinds of extreme weathers that we're contending with now.

SCORING BUMP

DAVID: That’s Umair Irfan. Read him at vox dot com.

Our show today was produced by Avishay Artsy, edited by Amina Al-Sadi, fact-checked by Laura Bullard, engineered by David Herman and Andrea Kristinsdottir. I’m David Pierce. This is *Today, Explained*.

**[10 SECONDS OF SILENCE]**