TEDTalks, Gavin Pretor-Pinney

Cloudy with a chance of joy

00:12 Clouds. Have you ever noticed how much people moan about them? They get a bad rap. If you think about it, the English language has written into it negative associations towards the clouds. Someone who's down or depressed, they're under a cloud. And when there's bad news in store, there's a cloud on the horizon. I saw an article the other day. It was about problems with computer processing over the Internet. "A cloud over the cloud," was the headline. It seems like they're everyone's default doom-and-gloom metaphor. But I think they're beautiful, don't you? It's just that their beauty is missed because they're so omnipresent, so, I don't know, commonplace, that people don't notice them. They don't notice the beauty, but they don't even notice the clouds unless they get in the way of the sun. And so people think of clouds as things that get in the way. They think of them as the annoying, frustrating obstructions, and then they rush off and do some blue-sky thinking. (Laughter) But most people, when you stop to ask them, will admit to harboring a strange sort of fondness for clouds. It's like a nostalgic fondness, and they make them think of their youth. Who here can't remember thinking, well, looking and finding shapes in the clouds when they were kids? You know, when you were masters of daydreaming? Aristophanes, the ancient Greek playwright, he described the clouds as the patron godesses of idle fellows two and a half thousand years ago, and you can see what he means. It's just that these days, us adults seem reluctant to allow ourselves the indulgence of just allowing our imaginations to drift along in the breeze, and I think that's a pity. I think we should perhaps do a bit more of it. I think we should be a bit more willing, perhaps, to look at the beautiful sight of the sunlight bursting out from behind the clouds and go, "Wait a minute, that's two cats dancing the salsa!" (Laughter) (Applause) Or seeing the big, white, puffy one up there over the shopping center looks like the Abominable Snowman going to rob a bank. (Laughter) They're like nature's version of those inkblot images, you know, that shrinks used to show their patients in the '60s, and I think if you consider the shapes you see in the clouds, you'll save money on psychoanalysis bills. Let's say you're in love. All right? And you look up and what do you see? Right? Or maybe the opposite. You've just been dumped by your partner, and everywhere you look, it's kissing couples. (Laughter) Perhaps you're having a moment of existential angst. You know, you're thinking about your own mortality. And there, on the horizon, it's the Grim Reaper. (Laughter) Or maybe you see a topless sunbather. (Laughter) What would that mean? What would that mean? I have no idea. But one thing I do know is this: The bad press that clouds get is totally unfair. I think we should stand up for them, which is why, a few years ago, I started the Cloud Appreciation Society. Tens of thousands of members now in almost 100 countries around the world. And all these photographs that I'm showing, they were sent in by members. And the society exists to remind people of this: Clouds are not something to moan about. Far from it. They are, in fact, the most diverse, evocative, poetic aspect of nature. I think, if you live with your head in the clouds every now and then, it helps you keep your feet on the ground. And I want to show you why, with the help of some of my favorite types of clouds. Let's start with this one. It's the cirrus cloud, named after the Latin for a lock of hair. It's composed entirely of ice crystals cascading from the upper reaches of the troposphere, and as these ice crystals fall, they pass through different layers with different winds and they speed up and slow down, giving the cloud these brush-stroked appearances, these brush-stroke forms known as fall streaks. And these winds up there can be very, very fierce. They can be 200 miles an hour, 300 miles an hour. These clouds are bombing along, but from all the way down here, they appear to be moving gracefully, slowly, like most clouds. And so to tune into the clouds is to slow down, to calm down. It's like a bit of everyday meditation. Those are common clouds. What about rarer ones, like the lenticularis, the UFO-shaped lenticularis cloud? These clouds form in the region of mountains. When the wind passes, rises to pass over the mountain, it can take on a wave-like path in the lee of the peak, with these clouds hovering at the crest of these invisible standing waves of air, these flying saucer-like forms, and some of the early black-and-white UFO photos are in fact lenticularis clouds. It's true. A little rarer are the fallstreak holes. All right? This is when a layer is made up of very, very cold water droplets, and in one region they start to freeze, and this freezing sets off a chain reaction which spreads outwards with the ice crystals cascading and falling down below, giving the appearance of jellyfish tendrils down below. Rarer still, the Kelvin–Helmholtz cloud. Not a very snappy name. Needs a rebrand. This looks like a series of breaking waves, and it's caused by shearing winds – the wind above the cloud layer and below the cloud layer differ significantly, and in the middle, in between, you get this undulating of the air, and if the difference in those speeds is just right, the tops of the undulations curl over in these beautiful breaking wave-like vortices. All right. Those are rarer clouds than the cirrus, but they're not that rare. If you look up, and you pay attention to the sky, you'll see them sooner or later, maybe not quite as dramatic as these, but you'll see them. And you'll see them around where you live. Clouds are the most egalitarian of nature's displays, because we all have a good, fantastic view of the sky. And these clouds, these rarer clouds, remind us that the exotic can be found in the everyday. Nothing is more nourishing, more stimulating to an active, inquiring mind than being surprised, being amazed. It's why we're all here at TED, right? But you don't need to rush off away from the familiar, across the world to be surprised. You just need to step outside, pay attention to what's so commonplace, so everyday, so mundane that everybody else misses it. One cloud that people rarely miss is this one: the cumulonimbus storm cloud. It's what's produces thunder and lightning and hail. These clouds spread out at the top in this enormous anvil fashion stretching 10 miles up into the atmosphere. They are an expression of