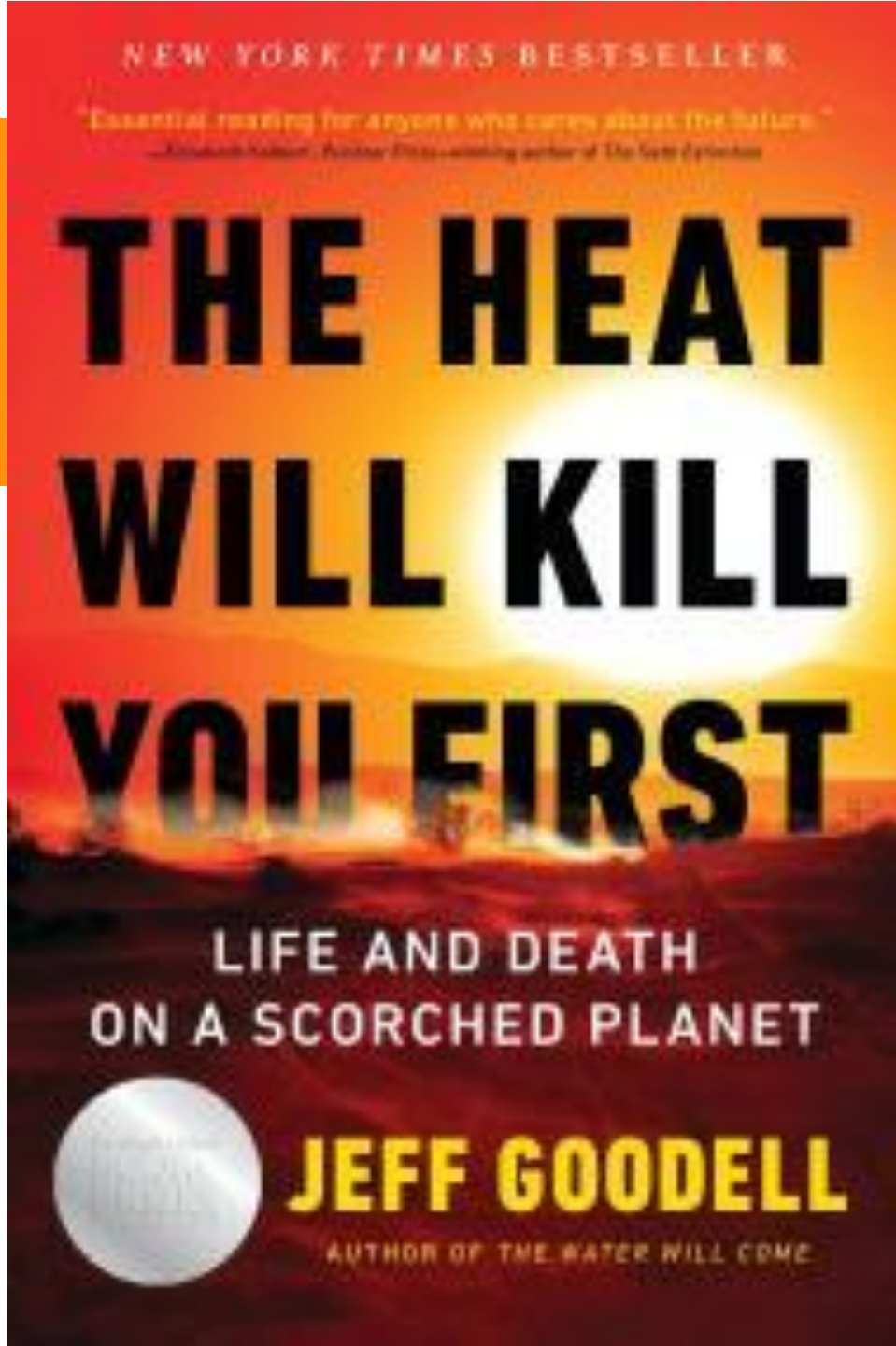




**Cumbre 2025 ¡ALERTA!
COLAPSAN CONDOMINIOS, EDIFICIOS
Y EL CAMBIO CLIMATICO**

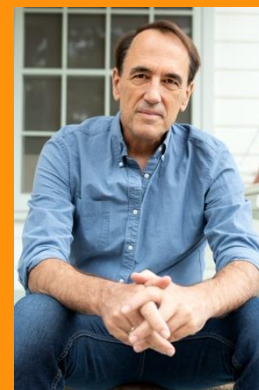
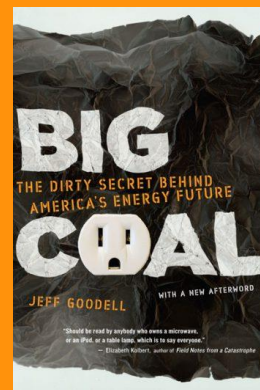
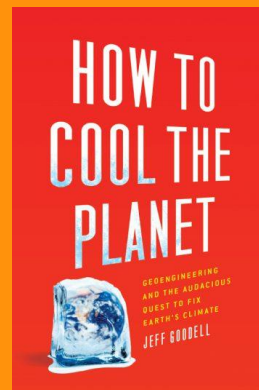
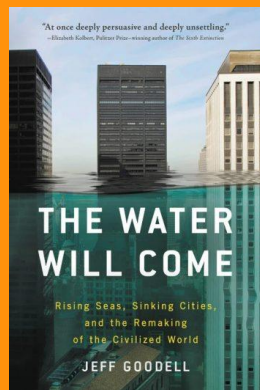
The Impacts of Heat From Climate Change

***Ricardo Herrera, PE
Climate Reality Leadership
Training Graduate***



Other Books by Jeff Goodell ...

- **The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World (2017)**
- **How to Cool the Planet: Geoengineering and the Audacious Quest to Fix Earth's Climate (2010)**
- **Big Coal: The Dirty Secret Behind America's Energy Future (2006)**



ACKNOWLEDGEMENTS

... global warming and climate change are both very kind of gentle terms and climate change and global warming are not gentle phenomena ...

... not a title that at first my Publishers loved ...

... risks that we face in the here and now ...

“The book was born on a 117° day in Arizona and came of age during a long midnight drive across Texas with my wife, Simone, during which she convinced me that heat was an important subject for a book, and I needed to write it.”

“In June 2018 I was in Phoenix for a meeting that had nothing to do with this *book*. It was a very hot day. I was running late as usual so I decided that I would basically run 15 blocks downtown to my meeting. By the time I got to 10 blocks, my heart was pounding. I was lightheaded and I thought I was going to pass out. I had the not so profound revelation that heat was dangerous and that if I had to run another 10 blocks, I might not make it. **Heat was dangerous in a personal way.**”

The passages that follow from the book were chosen and read by Jeff in the interview at The Pell Center of Salve Regina University—Story in the Public Square, on 12/16/24

“You probably think of heat on a temperature scale either Fahrenheit or Celsius. You think of it as a gradual, linear thing, a quality of the air around you that moves up and down in increments, or that can be controlled by a thermostat. 70° is hotter than 68°, which is a little hotter than 65°. The change of seasons also plays into this incremental perception of heat—winter gradually warms into spring, spring into summer. Yes, there are some days that are noticeably hotter or colder than others, but we crank up the air-conditioning or throw on a sweater. Temperature is a merry-go-round that we are used to riding.”

“In this book, my goal is to convince you to think about heat in a different way. The kind of heat I’m talking about here is not an incremental bump on the thermometer or the slow slide of spring into summer. It is **heat as an active force**, one that can bend railroad tracks and kill you before you even understand that your life is at risk. Scientists don’t fully understand how fast this heat can move or where it will appear next. But there is one thing scientists do know: this is a form of heat that has been unleashed upon us through the **burning of fossil fuels**. In this sense, extreme heat is an entirely human artifact, a legacy of human civilization as real as the Great Wall of China.”

“As a force, heat is mysterious because its effects are both slow and fast. Think of parched wheatfields, slowly dried out by months of heat that pulls moisture out of the ground and lifts it into the sky. Then think of heat waves that are the cosmic equivalent of a bug zapper that kills you before you understand what is happening. Extreme heat penetrates every living cell and melts them like a Popsicle on a summer sidewalk. **It reverses evolution**, driving entropy and disorder. It is the widening gyre that the poet W.B. Yeats wrote about, an extinction force that takes the universe back to its messy beginnings. Before there was light, there was heat. It is the origin of all things and the end of all things.”



The Pell Center - 12/16/24 – 28:15 –

<https://youtu.be/cdDcek-cAJs?si=HO95Ej8zjZjHJcca>

CBS Mornings – 1 year ago – 6:46 –

<https://youtu.be/OLiQuOlHoYw?si=wgYpYqxsOtOXqxn>

The Washington Post | Live 07/24/23 – 30:25 –

<https://www.youtube.com/live/oMbabPg8oPM?si=C35-PdsXncOSeDSz>

Politics and Prose – 1 year ago – 1:03:05

<https://www.youtube.com/live/NMNHGnSLhIQ?si=i2jZdhQrPDif8lop>

Ten Across – xxx – 49:27 –

https://youtu.be/MRgKgWdBd3c?si=WCJgV2q7vl_qopbz

Democracy Now! – 1 year ago – 20:16 –

https://youtu.be/r7ZVqXuBXHk?si=qv9cAyM1T5lTTNC_

The Australia Institute – 1 year ago – 58:34

<https://youtu.be/qRXKhcBpHqw?si=kfoFnX7WkGlC2gZn>

Obama's Climate Crusade – 9:12

<https://youtu.be/5oSvhJwlmis?si=LZKHv8-Z1X1Rga2O>

Commonwealth Club World Affairs (CCWA) – 1 year ago - 1:06:56

<https://youtu.be/mzjdzQcQySE?si=3-Y7jqdiYiBvJhPH>



Climate Change – Averting Catastrophe | DW Documentary – 1 year ago – 1:25:56

<https://youtu.be/pEt6-jA2UE4?si=gXwpLXJ7J1fLFeVb>

5x15 and Keystone present: Six Ideas to Change the World: Jeff Goodell on Heat | 5x15 – 1 year ago – 58:31

<https://youtu.be/iYHasgvwRno?si=VoigNlbyBuQS-ywm>

JLF International - Planet on the Boil | Jeff Goodell in conversation with Jeanine M. Canty – 2 months – 58:01

<https://youtu.be/XRkfhwFyuNw?si=YGiQvC4IMzTzpRF4>

The Climate Pod - Why Heat is So Deadly (featuring Jeff Goodell) – 1 year ago – 1:01:58

<https://youtu.be/FcAOVotXGW8?si=JIQ-3jobJEBJeoVm>

Forbes Breaking News - 'Extreme Events Are Getting More And More Extreme': Jeff Goodell On Climate Change And Heat Waves – 1 year ago – 4:38

<https://youtu.be/oBrrt3yjYW8?si=wPPk8ldmVK6o5KlI>

Reversing Climate Change - S3E51: The Heat Will Kill You First—w/ Jeff Goodell, author and contributing editor of Rolling Stone – xx - 57:50

<https://youtu.be/djQhWGMCRGU?si=urAFwQYkQLSMolQA>

Obama's Climate Crusade – 9:12

<https://youtu.be/5oSvhJwlmis?si=LZKHv8-Z1X1Rga2O>



University of Kansas Medical Center (KUMC) Office of International Programs

The Heat Will Kill You First, by Jeff Goodell Part 2A – 1 year ago - 8:35

<https://youtu.be/dIAPqihqIpl?si=JKASoWFEfMyeL8EJ>

The Heat Will Kill You First, by Jeff Goodell Part 2B – 1 year ago - 34:51

https://youtu.be/KgaDilwMyUE?si=s_coMEhMLEQifs7x

The Heat Will Kill You First, by Jeff Goodell Part 3 – 1 year ago - 55:21

https://youtu.be/AmVPoz3_e7s?si=5_gQc_9EYYbhv4pj

Obama's Climate Crusade (Rolling Stone Presents) – 9 years ago - 9:12

<https://youtu.be/5oSvhJwlmis?si=6mmY3bBwDPppBfls>

THE HEAT WILL KILL YOU FIRST

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Epilogue: Beyond Goldilocks

Prologue: The Goldilocks Zone

Heat is invisible. It surrounds you and acts on you in ways that you cannot completely control. You sweat. Your heart beats faster. You become thirsty. Your vision blurs. The air you breathe smells burned. It can be **life threatening**.

In the summer of 2021, the Pacific Northwest and Portland in particular, had a temperature swing from 76° to 114° degrees, the hottest temperature in 147 years.

The ocean absorbs the equivalent heat from 3 nuclear bombs every second. Since CO₂ stays in the atmosphere for thousands of years, we will **not** cool off when we stop emitting CO₂. We will be stuck in a hotter planet until we can suck massive amounts of CO₂ from the atmosphere. Danger lurks in bacteria that might be unleashed when the permafrost disappears. Extreme heat penetrates every living cell and destroys them. Great migrations will occur as temperature rises. **Adaptation to extreme heat**, however, **has its limits**. Heat exposes deep fissures of inequity and injustice. Poverty equals vulnerability. We are all in the same storm, but we are **not** in the same boat.

As temperatures rise, a lot of **living things will die**. The Lancet estimates that **489,000** people worldwide died from extreme heat in 2019.

For 3 million years, while humans evolved, the climate has been relatively stable. Those days are coming to an end. The last time the earth was hotter than it is today was at least **125,000** years ago. Over the next 50 years, half of the world's population will experience **life threatening heat and humidity**.

3. Heat Islands

Phoenix 113° - flights delayed because planes can't get enough lift in the thin, hot air.

In a heat wave, electricity is **NOT** a convenience. **It is a tool for survival.**

Modern cities are empires of asphalt, concrete and other materials that absorb and amplify the heat.

Downtown can be as much as 20° hotter than the surrounding area—the urban heat island effect.

LEED-certified buildings are tightly sealed, making them dangerous **heat traps** when the power goes out.

Hospitals overflow with people suffering from heat exhaustion and heat stroke. Wildfires can spring up. The air will become hazy and difficult to breathe. The National Guard at times may need to be called in to preserve order. Phoenix has cooling centers, but they are difficult to get to if you are poor.

The story of Anjalai follows. Chennai (formerly Mumbai) is a city of eleven million in southern India. It is hot and humid most of the year. Daily routines of inhabitants are driven by the heat. In the 70s the city grew horizontally, not vertically. Wetlands (80% gone) and swamps were filled. In 2019, heat waves of 123° occurred.

Also talked about was Mercy Muthu in Perumbakkam, near Chennai. And the Ice House, built in 1842 in Mumbai.

Stories of good Samaritans Brian Faretta and Rich Heitz in Glendale near Phoenix – Stephanie Pullman, dead from heat exposure after her power was cutoff and Leonor Juarez, poor and surviving as best she can.

.Maricopa 2022 – 386 heat related deaths; Europe 2003 – **70,000** deaths.

5. Anatomy Of A Crime Scene

07/19/22 – UKs hottest day ever. Friederike Otto, climate scientist biking through London, observing. Heat is not temperature. Temperature is a measure of heat. Thermometer was invented in 1602. A modern thermometer was developed 100 years later. Advancing the theory of heat was attributed to Count Rumford, born in 1753. His contributions led to the 1st and 2nd laws of thermodynamics. Antoine Lavoisier in the 18th century proposed the caloric theory of heat. It supposed that heat was an invisible substance that flowed into a body when it was heated, and flowed out when cooled. Rumford did not believe in the theory. Heat is the vibration of molecules.

Water holds more heat than air. Some gases trap heat in the atmosphere, while others don't. As we burn fossil fuels, and release CO₂ molecules into the atmosphere, **our planet heats up**. Early pioneers of climate science was Eunice Newton Foote in 1856. Nobody worried about the impacts of a climate change at the time. Roger Revelle in the **1950s** speculated that in the 21st century the greenhouse effect might in fact exert **"a violent effect on the earth's climate"**. In 1988, NASA scientist James Hansen stated that "the greenhouse effect has been detected, and it is changing our climate now". The 2003 heat wave in Europe killed **70,000**, more than the American casualties during the entire Vietnam war. In 2010, a heat wave in Russia with temperatures as high as 104°, killed more than **55,000**. **Extreme event attribution** became accepted. "Attribution studies are really essential in terms of understanding human impacts of climate change." The question - Who is responsible for thrashing the climate and how can they be held responsible.

13. Roast, Flee, Or Act

In the summer of 2003, Paris was hit by a heat wave. For 9 days in August, the temperature was above 95° and got as high as 104°. Hospital emergency rooms started to fill up. Space to store corpses were full. Refrigerated tents were put up. Refrigerated trucks were leased. Burials and cremations could not keep up with the dead. The typical time of 6 days became 15. **In two weeks, 15,000 died** in France from the heat wave. Many of the dead lived alone, in attic apartments with zinc metal roofs, where they were cooked. The smell of death in floors below the attic apartments was overwhelming. In 2015, at the end of the Paris climate summit in COP21, Paris felt like a place of progress and victory.

Cities must not become **deathtraps** for its citizens. Cities built for one climate must be modified for another. The challenge for cities in a superheated planet are two – how can it grow and prosper in a heat-smart way and what do you do with the built environment. Initiatives in NYC, Seville, Freetown in Sierra Leone, LA, Austin, Orlando, Tempe, etc. are mentioned.

Paris knows now that heat waves are **stronger, more frequent** and **more deadly**. The cooling of Paris began in 2014 with Anne Hidalgo, still mayor of Paris. Her goal was and remains “to transform this magnificent city without damaging it”. A challenge – Paris has a 9 percent tree canopy, much less than Boston, Oslo, etc. Trees inhale CO₂, and exhale oxygen.

The Paris of today was the result of a major renovation that began in the 1850s. There is a struggle with past and the future in order to respond to climate change.

4. Life On The Run

Hurricanes are **heat engines**, powered by warm, moist air rising over warm oceans. There are no hurricanes in the Arctic. The hotter the world gets, the more intense hurricanes become.

All creatures have evolved within a basic temperature range. When it gets too hot, it becomes necessary to move to a more habitable climate niche.

Terrestrial creatures are moving nearly 20 kilometers every decade. Marine creatures also move to cooler waters, more quickly than terrestrial creatures. Some in the frozen north have nowhere to go.

Plants are on the move as well, at two miles per decade.

There is a problem of synchronicity, with bumblebees in particular. Some are disappearing eight times as fast as they are recolonizing others.

One of the central questions when it comes to adaptation is "**Adaptation to what?**". Heat waves right now that are 20° or 30° above what you expect is another.

In many places in the world today, heat is rising faster than our ability to adapt to it.

Globally, the climate crisis has put people on the run. The UN estimates that 4 out of 5 African countries don't have sustainably managed water resources; some **700 million** people will be on the move by 2030.

Per Abraham Lustgarten, "should the flight away from hot climates reach the scale that current research suggests is likely, it will amount to a vast remapping of the world's populations." Migration driven by a lack of food and water, exacerbated by extreme heat, is pretty high on the list.

6. Magic Valley

In 2022, extreme heat hurt crop harvests all over the world. Cited were France, locations in the European Union, and India. Without enough food, there is only **hunger, chaos, and violence**. Putin weaponized the situation, by disrupting Ukraine's wheat supply, triggering a global food crisis. High food prices sparked riots in Sri Lanka.

Since 2019, the number of people facing food insecurity has soared. In 2022, **50 million people** in 45 countries were teetering on the edge of famine. In the coming years, the challenge of feeding the world will only get more complex. The world's population is projected to grow from 8 billion to almost 10 billion by 2050. **Food productivity is in decline**. As long as global warming increases, the overall decline in crop productivity is likely to continue. Donald Ort of the University of Illinois Urbana-Champaign explained that the largest single global change that threatens food security is high temperature.

7. The Blob

A Texas-sized area in the northern Pacific appeared in the summer of **2013**. Ocean temperature rose 5°. Climate scientists looking at satellite data had never seen anything like it. Nick Bond nicknamed it The Blob. It killed phytoplankton and krill, the staple of whales, salmon, sea birds, etc. It disrupted the food chain. Over the next 2 years, it moved down the coast of Alaska and California. It changed the weather on the Pacific coast. Ocean temperature on the coast rose. Suspected was its contribution to the wildfires in California in 2018. It was a slow-moving **climate catastrophe**.

Water covers more than 70% of the planet's surface area. 97% of the water is in the ocean. There has been more exploration of space than of the ocean. One metric ton of plastic enters the ocean every 4 seconds. The rate of warming of the ocean has doubled between the 1960s and 2023. It has trapped 90% of heat from burning of fossil fuels. It slowly releases the heat, reducing the volatility on our climate. During the 21st century, the ocean is projected to transition to unprecedented conditions. Monterey Bay and its kelp beds. Jeff and Grace scuba dived into it. The kelp forest is disappearing. The ecosystem has collapsed.

There have been other marine heat waves in 2012, 2015, 2017 and 2022 in the Mediterranean, 2018 in New Zealand, 2021 in Uruguay. Coral reefs (in the Great Barrier Reef in Australia and others) are suffering the effects of a warmer ocean. They have been around for 250 million years.

12. What You Can't See Won't Hurt You

Jacobabad in Pakistan was assigned to Pakistani photographer Saiyna Bashir and reporter Ben Farmer, who worked for UK's *The Telegraph* in June 2021 for a story on extreme heat. **Jacobabad is one of the hottest cities on the planet.** A few weeks before, the temperature hit 126° every day for more than a week. Her photos have won awards. Heat is a difficult subject. It is an **invisible killer**. There are no iconic photos of heat. In the city, everyone was dressed for heat. There was no shade, no relief. In the town square, men were selling ice. Each cart had 5 or 6 blocks of ice. It was necessary after an hour to take refuge in the air-conditioned car they had. They visited a water station, where plastic containers on carts pulled by donkeys were filled with hoses. One individual sat on the ground and got relief from the heat by completely dousing himself with water from the hose he held over his head.

People generally **love warm weather**. Travel images suggest that **paradise is where it is warm and sunny**. People, however, get confused about when heat goes from something that feels good to something that can kill you. Also difficult is defining what a **heat wave** is, how long it lasts, and what the associated humidity is. Heat waves are more like stories than simply meteorological events. The National Weather Service (NWS) ranks heat in categories: watches, warnings and advisories. There is no evidence that these announcements make any difference. No one should die in a heat wave. But they do if they are alone, don't know what to do, and when to ask for help. They die if they do not know the warning signs of heat exhaustion or heatstroke. Names for heat waves came about in Seville in 2022, based on mortality.

10. The Mosquito Is My Vector

Aedes Aegypti is a killing machine, one of the deadliest in human history. It can carry a whole arsenal of dangerous diseases from yellow fever to Zika. Only females drink blood, necessary to produce eggs. Dengue has been around for centuries, but since 1970, the prevalence has increased tenfold, making the disease endemic, present in more than 100 countries. Annually, **390 million** are infected. Climate change is going to **sicken and kill** a lot of people. Mosquitos will make that happen.

The biggest impact on human health and well-being may be the emergence of **new pathogens** from animals. They are on the move because of climate change. The vast majority of the new infectious diseases have come from zoonotic pathogens, viruses that jump to animals and then humans. An example in the book is the 1994 **Hendra virus** in Australia that killed horses and 7 persons that interacted with the horses; the culprit was one or more giant fruit bats. Bats have immune systems that are tolerant of infections. They are associated with Nipah, Marburg, Ebola, rabies, etc.

Ticks are also of concern. They include Hyalomma, brown dog ticks, deer ticks that carry Borrelia burgdorferi, leading to Lyme Disease, Asian longhorned tick (Haemaphysalis longicornis) native to East Asia, Australia and New Zealand. They can carry several deadly human pathogens with thrombocytopenia syndrome (SFTS) and Rickettsia japonica which causes Japanese spotted fever. CCHF worries scientists because of what they call is vector switching.

1. A Cautionary Tale

On Monday, August 16, 2021 Jonathan Gerrish, Ellen Chung, Aurelia “Miju” Chung-Gerrish and Oski were dead. The cause of death for Jonathan Gerrish, Ellen Chung and Aurelia “Miju” Chung-Gerrish was determined to be **Hyperthermia**, and probable dehydration due to, environmental exposure.

Hyperthermia- The condition of having a body temperature greatly above normal.

The human body is a heat machine. While alive, the body generates heat. If your body gets **too hot, too fast**, you are in **big trouble**, regardless of whether the heat from the outside or from the inside.

Hyperthermia causes a range of physiological responses – dizziness heat cramps, up yo and including heat stroke. Two kinds, classic and exertional. Other stories are included about Kelly Watt and Philip Kreycik (37) who were excellent athletes

Sam Cheuvront accompanied Jeff’s climb of the Maderas volcano in Nicaragua



8. The Sweat Economy

Sebastian Perez, 38 years old, born in Guatemala, was a worker at Ernst Nursery and Farms in Oregon. Died 2021. The temperature rose to 106° the day he died.

Kenton Scott Krup, 51, died in a Walmart warehouse where the temperature was 96°.

Jose Cruz Rodriguez, 23, a UPS driver, died in the parking lot in Waco, Texas.

Esteban David Chavez Jr., 24, a UPS driver died delivering packages in California.

In the US some 15 million people work part or full time outside.

Thousands of migrant workers labored and died in Qatar for the 2022 FIFA World Cup event's stadiums and hotels. Summer temperatures reached 113°. No work was permitted, however, between 11:30 am to 3:00 pm. **There was no investigation of worker deaths.**

In 2015, a farmworker study found they are **35x** more likely to die from heat-related causes.

An editorial in the New England Journal of Medicine predicted that kidney disease is one of other heat-sensitive illnesses. Heat also contributes to on-the-job injuries, as many as 20k per year. There are **no federal rules related to heat exposure**. OSHA has ignored the problem. A 2021 act in the House of Representatives on the matter never made it to the House floor. State Regulations are not much better, although California and Washington have some rules for outdoor workers. In Oregon, a weak directive has been adopted.

Note: Jeff worked with his father and grandfather, both landscape contractors.

11. Cheap Cold Air

Harold Goodman had an air conditioning business in Houston. He owned many cars. When he got rich, he bought a 700-acre horse farm.

1974 saw research that **CFCs** were able to deplete the ozone layer. In 1985, a hole in the layer was found over Antarctica. In 1987 the Montreal Protocol was in place, to reduce CFCs, by 50%. CFCs are **now banned** in 197 countries. The ozone layer is slowly recovering. **HFCs** that replaced CFCs are greenhouse gases that are **15,000x** more potent CO₂. HFCs are also being phased out over the next several decades. Energy to run ACs in buildings account for 20% of energy consumption generated by fossil fuels. The demand for ac equipment is huge. By 2050, 4.5 billion ac units are projected to be in use. All the energy required for these units is a climate disaster. When the grid cannot deliver enough energy, **people die**. Energy demand can be improved by the use of more energy efficient units. The way buildings are cooled must be reevaluated.

The legacy of ac is that it **divides** those who have it (the cool), and those who don't (the damned).

2. How Heat Shaped Us

You cannot exclude heat from the beginnings of planet Earth. It began many million years ago. How life emerged out of the hot mess that became Earth is only dimly understood. Reaction to heat by living organisms led to cold blooded creatures, the **exotherms**, and the hot blooded called **endotherms**. Exotherms spend **30x** less energy than endotherms regulating body temperature. The bones of Lucy, who lived 3.2 million years ago, were discovered in 1974 in Ethiopia. Heat management is a survival tool for all life on Earth. Comments about elephants, koalas, squirrels, hippos, lions, rabbits, vultures, giraffes, camels, ants, termites, bees, etc. Camels are extremely well adapted in water management. Jill Pruetz has spent more than 20 years studying chimpanzees (some 32) in a hot (as much as 120°) environment in Senegal, near the village of Fongoli. Human evolution required the equivalent of an internal sprinkler system to control body temperature. Sweat glands accomplished this. In other living creatures, **apocrine glands** perform this function. Humans have some in armpits. Sweat from the glands also has an odor. **Eccrine** glands improved the heat management process, by squirting water on the body. We have about 2 million of these glands on our body. You need a microscope to see them. In hot weather, people can easily sweat 1 quart per hour, or 12 quarts per day.

When it comes to heat management, we are like actors in silent films, who suddenly find themselves in speaking roles. We know the script, but our skills are no longer well matched for the world we live in.

9. Ice At The End Of The World

A trip on the Nathaniel B. Palmer, a 308-foot-long ABS-A2 icebreaker and research vessel began on January 30, 2018. On board were 26 scientists and 31 crew members. The purpose was to study the risk of are of the Thwaites Glacier (the Doomsday Glacier per JG in 2017), one of the largest in **West Antarctica**. The trip was funded by NSF and the British Antarctic Survey (BAS). The question to be answered—is the West Antarctic sheet on the verge of unstoppable collapse? If the answer is yes, then goodbye to every low-lying coastal city (Miami for example). Antarctica is the size of the US and Mexico combined.

The **Antarctic Circumpolar Current**, 5x more powerful than the Gulf Stream. Waves of 60 feet have been recorded. The Drake Passage is the most dangerous passage in the world for ships. In 1974, the glaciers of West Antarctica were more vulnerable to rapid melting than anyone knew. It turns out that seals are terrific research assistants. They are tagged in order to record where seals swim, how deep they dive, and information about salinity and ocean temperature. A female seal is tagged on one of the Schaefer Islands. Fact: **70%** of the earth's fresh water is frozen here. Ice sheets can be 3 miles thick.

Scientists mentioned are: James Hansen, NASA; Ted Scambos and Mark Serreze, National Snow and Ice Data Center, Boulder Colorado; John Mercer and Ian Howat, Ohio State; Hans Weertman, Northwestern University; Lars Boehme, University of St. Andrews, Scotland; Bastien Queste and Peter Sheehan, UK's University of East Anglia; Gui Bortolotto, University of St. Andrews; Anna Wahlin, Sweden; Rob Larter, BAS.

14. The White Bear

On Baffin Island, in the Canadian Arctic, Jeff, David Keith and Geoff Holmes expected to encounter polar bears, since the island has one of the **densest populations of polar bears in the world**. They were there for the entire month of May. First encounter was with a female polar bear and her young cub. For polar bears, heat equals starvation. They depend on sea ice to hunt seals. In May, they must **eat or die**.

Some discussion of the company Carbon Engineering, a company that scrubs CO₂ out of the air.

Also the concept of spraying sulfate particles into the stratosphere, mimicking volcano eruption activity. There is a concern with solar engineering because of the increased incidence of monsoons.

The industrialized nations are still dumping **36 billion tons of CO₂** into the atmosphere, **10x** faster than at any time in earth's history.

Polar bears are meat eaters. They have no predators.

On the last day there was an encounter with a mother polar bear and her two cubs. Fortunately, nothing happened.

Epilogue: Beyond Goldilocks

Heat will be the engine of the transformation. It will be **deliberate heat. Premeditated heat**. We plead guilty to 1st degree heat. We have known for more than a century about the consequences burning fossil fuels inflict on climate. In some regions of the tropics, **outdoor life will be virtually impossible**. Survival will depend on access to cool spaces, clean water, decent food and medical care.

Some Scientists Mentioned in the Book

Chapter 7 – The Blob

Jane Lubchenco, former head of NOAA; Nick Bond, UW; David Swain, UCLA; Neil Shubin, U Chicago; Ken Caldeira, Breakthrough Energy; Hans-Otto Pörtner, Germany-an IPCC author; Kevin Trenberth, NCAR in Colorado; Laura Rogers-Bennet, California Fish and Wildlife Dept.; Van Houtan; James Salzman UC Santa Barbara; Terry Hughes, James Cook University; Raquel Peixoto, King Abdullah University

END

No Podemos Conformarnos Asi Solamente!



Déjame bregar con el asunto – El Mundo 12 de abril de 1999

No sé su nombre, no sé en qué época vivió; quizás esté vivo, pero estoy seguro de que fue uno de los genios más grandes que ha producido la humanidad. Su nombre no viene al caso, es su obra la que cuenta: no es otro que ese ilustre puertorriqueño que se inventó la frase “Déjame bregar con ese asunto” (y en esto estriba la genialidad de la frase) no quiere decir nada, no se compromete a nada, no nos da indicación de cuándo se resolverán los problemas, ni siquiera si se llegará alguna vez a tomar una decisión sobre el tema. Que usted tiene un teléfono que no le funciona, no se enfogone, es posible que la Telefónica ya le haya dicho que está “bregando con el asunto”. Si su factura de electricidad es excesivamente alta, siempre encontrará un funcionario de la Autoridad que le aconsejará que pague primero y los deje “bregar con el asunto”. Su jefe no le acaba de aumentar el sueldo, pero usted no se puede molestar, porque ya le dijo que espere un poco y lo deje “bregar con el asunto” y tampoco se puede molestar con los que vinieron a arreglarle la máquina de lavar y salieron a buscar una pieza hace 2 meses, porque la pieza no aparece, pero ellos dicen que están “bregando con el asunto”. Descubrí la frase hace dos años, cuando mi negocio pasaba por una crisis en que los clientes se quejan, los acreedores le agobian, estaba a punto de enfermar por las presiones, hasta que un amigo me dio la solución, “Empieza a bregar con el asunto”, me dijo. ¡Qué diferencia! Hoy tengo una salud excelente, estoy relajado, me sobra el tiempo, mis clientes y mis acreedores me admiran y me respetan. Saben ahora que no importa lo que esté sucediendo, yo soy persona seria y estoy “bregando con el asunto”.

Qué diferente sería este mundo si la frase hubiera sido conocida desde antes. No existiría la Semana Santa, porque Pilatos estaría todavía “bregando con el asunto”. Si las Malvinas fueran puertorriqueñas, no habría que lamentar ningún muerto, no hubiéramos enviado aviones y barcos, y la Thatcher hubiera dicho que la dejaran “bregar con el asunto”. Porque si hay algo cierto en este país es que ni un solo puertorriqueño tiene derecho a sentirse molesto o defraudado. Quién no sabe que asuntos como el status, los contratos, el crimen organizado, el presupuesto, los gastos innecesarios y un sinnúmero de cosas más están ya a punto de resolverse, sencillamente porque se está “bregando con el asunto”.

Creo que la mejor demostración de la fuerza pacificadora de esta frase me la dio mi amigo Anselmo, que durante años peleó con su vecino tratando de que el mismo desistiera de criar gallos en el patio de su casa. Anselmo nunca recibió una mala contestación de su vecino; al contrario, siempre lo encontró en la mejor disposición de resolver el problema. Lo único que el vecino le pidió siempre fue que lo dejará “bregar con el asunto”.

Pasaron los años, Anselmo finalmente se fue a ver al abogado. El licenciado lo escuchó con atención y finalmente, levantándose de su asiento, caminó hacia Anselmo, y le dijo: “No te preocupes, creo que tenemos un buen caso. Vete tranquilo a casa y déjanos bregar con ese asunto”.

Hoy tenemos que enterrar a Anselmo, sus familiares no saben si enterrarlo en Lares donde nació; en Caguas donde se crio; o en San Juan donde vivía. No se sabe la hora del entierro. Se está bregando con el asunto”.

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Climate Reality Leadership Project



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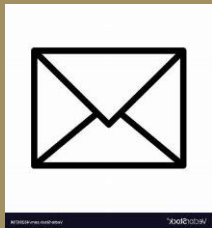


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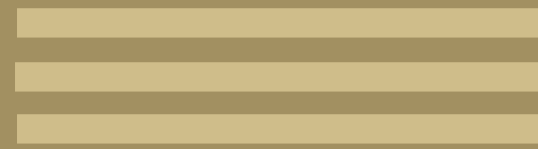


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GRETA THUNBERG – A FEW CHOICE WORDS (2018 & 2019)

- My name is Greta Thunberg. I am 15 years old. I speak on behalf of Climate Justice now.
- **No one is too small to make a difference.** If a few children can get headlines all over the world by not going to school, then imagine what we could all do together if we really wanted to.
- We cannot solve a crisis without treating it as a crisis.
- There are no gray areas when it comes to survival. Either we go on or we don't. We have to change.
- This is an emergency, and not just any emergency. This is the biggest crisis humanity has ever faced. This is not something you can like on Facebook.
- I ask YOU to prove me wrong. For the sake of your children and your grandchildren. For the sake of life on this beautiful living planet. Stand on the right side of history

#1 NEW YORK TIMES BESTSELLER

GRETA THUNBERG



**NO ONE
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TO MAKE
A DIFFERENCE**

