



the weekly anthropocene



dispatches from the wild, weird world of humanity and its biosphere

By Sam Matey, October 7, 2020

Australia. Tasmanian devils (*Sarcophilus harrisii*, pictured) are an evolutionary marvel, one of the last of a long lineage of large predatory marsupials. They disappeared from mainland Australia a few thousand years ago (possibly due to competition with the dingoes introduced by Aboriginal settlers), and were put at risk again in their Tasmanian stronghold by European colonizers bent on exterminating them in the 1800s. Just as they started recovering from that, they were struck in the 1990s with Devil Facial Tumor Disease, a horrendous form of contagious mouth and face cancer that has devastated the social devils. (Yes, a contagious cancer. Pity the poor devils). Now, this year, a conservation group named AussieArk has established a new safe haven for the species. 26 disease-free Tasmanian devils have been released in Barrington Wildlife Sanctuary, a fence-protected forest preserve in New South Wales. They'll likely help stabilize the entire forest ecosystem, controlling kangaroo and wallaby populations and competing with or driving away invasive feral cats and foxes, thus making a more hospitable environment for other marsupial species like quolls, potoroos, and bandicoots. This is another great example of rewilding-one of the most hopeful trends of the Anthropocene! With citizen and government support, this could yet be an epoch in which we make ecosystems even more diverse and species-rich than they were before the onslaught of the climate crisis. For more (including a video with Chris Hemsworth at the reintroduction!) see tinyurl.com/DevilReintroduction.



Colorado. Rocky Mountain Steel, in Pueblo, Colorado, is one of the largest producers of steel in North America. They just signed a multi-hundred million dollar deal to become the world's first solar-powered steel mill! Heavy industry is being swept along in the escalating renewables revolution. Great news! For more, see tinyurl.com/RockyMountainSteel

Super-Enzymes. After years of work investigating the enzymes bacteria have use to break down plastic, a research team has created a new "super-enzyme" that breaks down plastic at room temperature six times faster than the previous best. The super-enzyme is created by linking two separate naturally evolved bacterial enzymes in the lab-and the researchers believe that if they combine it with a few more, it could work even faster and possibly even break down fabrics as well. Prototype centers for enzymatic plastic recycling are now being built in Portsmouth, UK, and Lyons, France. Great news! For more, see tinyurl.com/SuperEnzymes.



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Wildfires. While the world is preoccupied by the US election and COVID-19, 2020 has also been the year of unprecedentedly massive wildfires around the globe. First, this year's California fire season has reached some horrifying new milestones, and shows no signs of ending. Wildfires have consumed 4 million acres in California alone this year, an area both larger than Connecticut (!!!) and more than double the previous yearly record. The August complex fire, in



Mendocino State Forest north of San Francisco, became the largest wildfire in recorded state history on October 5th, hitting one million acres in size. That's a "gigafire" nearly five times the size of New York City, which has already burned more land this year than all recorded California fires between 1932 and 1939 combined. As of October 6th, it was only 58% contained. (Pictured: the Bidwell Bay Bridge in Oroville, California). For more, see tinyurl.com/Gigafires.

In the Pantanal, Brazil's great inland forested wetland, the fires are, unbelievably, much worse. 22% of the entire Pantanal floodplain, over 7.9 million acres, has been or is now burning—an area larger than Massachusetts. Heroic volunteers have tried to save a few of the caimans, jaguars, tapirs, and other local wildlife injured or made homeless by the flames, but an untold super-majority have doubtless perished. As the Pantanal is likely to become even hotter and drier in the next few years due to



climate change, scientists are concerned that repeated destruction of this magnitude may lead to a permanent regime shift, and the loss of the entire ecosystem. (Pictured: a burned lowland tapir rescued near Porto Jofre, image courtesy of National Geographic). For more, see tinyurl.com/PantanalBurning and tinyurl.com/PantanalAnimals.

There's not a lot new to say about this. Climate scientists have been warning about this kind of widespread destruction for decades, and now it's become reality. The climate crisis is here, and calamitous disasters are the new normal. What we as humanity can do is minimize the damage as best we can, while doing our damndest to transition to renewables and draw down carbon as fast as possible to stop the warming of the world getting even worse. And maybe, perhaps even in our lifetimes, reverse it.