

# the weekly anthropocene

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



**Niue, Chile, and Mexico.** On October 4<sup>th</sup>, the governments of Chile and Niue (a small Pacific Island nation) have created three new marine protected areas. Together, these three parks preserve an area of over 290,000 square miles—more than twice the size of Germany. The next day, Mexico expanded its preexisting marine protected area around the uninhabited Revillagigedo Islands, protecting an additional 57,000 square miles. Together, these four new parks protect manta rays, sharks, whales, sea turtles, and hundreds of species of fish. Chile's Diego Ramirez park also protects the nesting grounds for 80% of the world's blue petrels, and Niue's park protects several rich coral reefs. These nations show a deep commitment to protecting Earth's natural wealth.



**Weddell Sea, Antarctica.** According to *National Geographic*, a hole the size of Maine has appeared in the winter sea ice covering of the Weddell Sea. This is the largest such hole (they are known as *polynyas*) to form in the Weddell Sea since the 1970s. Climatologists are currently unsure whether this polynya is related to climate change.

**Pandas.** In welcome news for panda lovers everywhere, the International Union for the Conservation of Nature (IUCN) has downgraded the giant panda from “endangered” to merely “vulnerable,” thanks to intensive conservation efforts by the Chinese government.

**Myanmar.** In the early 2000s, the Burmese star tortoise (*Geochelone platynota*) was extinct in the wild, with the last survivors of the species living in captivity. In 2004, the Myanmar conservation ministry and the Wildlife Conservation Society began a captive-breeding program. A new study on the results (published in *Herpetological Review*) has found that the program has been an unqualified success, with the captive-breeding facilities' population growing from approximately 175 to over 14,000! Some tortoises have already been released into protected areas. See the adorable tortoises in action at <https://youtu.be/fyqn5OBb6Dg>.

**Mexico City.** A new study published in the journal *Biology Letters* found that house finches in Mexico City are intentionally weaving cigarette butts into their nests. The birds pick cigarette butts from the street and extract the fibers in the filter to use as nesting material. These nicotine-stained fibers repel parasites that could harm their young.

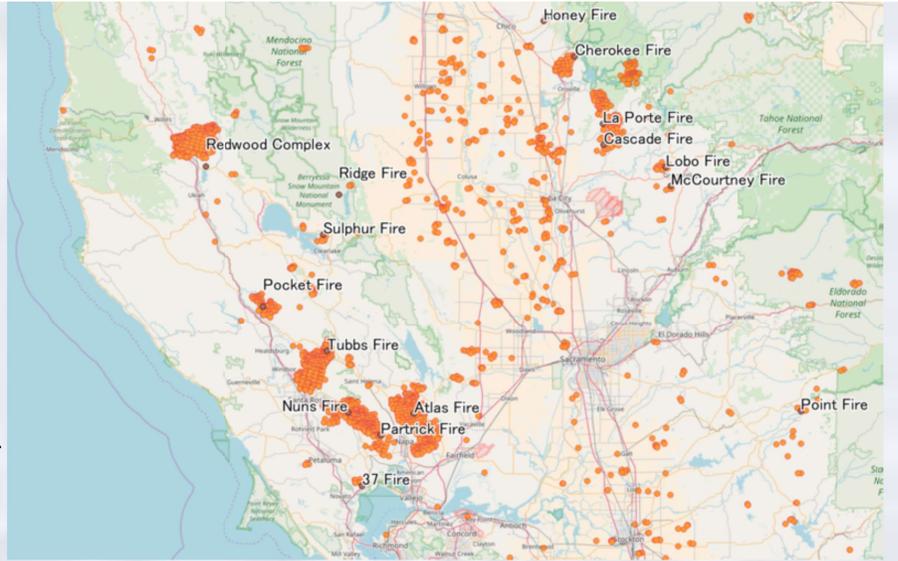
**USA.** The Trump Administration has now officially rescinded President Obama's Clean Power Plan, a set of regulations that limit the amount of carbon dioxide that power plants can emit. As the CPP has been tied up in legal disputes since 2016, this will have little immediate effect, but it is another dispiriting sign that President Trump prefers propping up the outmoded and dangerous fossil fuel industry to supporting rapidly growing, ecologically sustainable renewable energy.



# the weekly anthropocene

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

**California.** The state of California is being ravaged by deadly wildfires. According to CBS News, at least 31 people are confirmed dead, over 3,500 buildings have been destroyed, and 265 square miles have been burned. California Governor Jerry Brown blames climate change for exacerbating the situation. "With a warming climate, dry weather and reducing moisture, these kinds of catastrophes have happened and will continue to happen and we have to be ready to mitigate, and it's going to cost a lot of money," Brown stated. Fire experts and scientists agree.



**The Amazon Rainforest.** A new study led by Professor Rong Fu of UCLA found that the trees of the Amazon Rainforest are creating their own rain. Analyzing water vapor over the Amazon with a NASA satellite, Professor Fu found that it was abnormally high in deuterium, a heavy form of hydrogen that is left behind by water evaporating from the oceans (the normal source of clouds) but is present in water that plants release into the atmosphere (a process called transpiration). She theorizes that not only do the trees create rain in the near term with this process, they influence weather long term: as the new clouds produce rain, they create warm air, which rises, causing air circulation that brings in more clouds from the ocean. This is potentially the mechanism that triggers the transition from dry season to wet season, and shows that deforestation could have a large role in changing weather patterns and creating drought.

## Announcements.

You now have a chance to contribute to this newsletter! Starting next week, we are introducing the reader-submitted Q&A and My Experience sections.

For our new Q&A section: If you have a question about anything related to environmental science, from “what does the term 'anthropocene' mean?” to “what kind of bag should I use at the grocery store?” please feel free to email the editor at [samuel.matey@maine.edu](mailto:samuel.matey@maine.edu) with “Question” in the subject line. We will give an article-length answer to one reader's question in the next issue!

For our new My Experience section: If there's an environmental issue you feel passionately about and/or has affected you personally, feel free to submit a 100-300 word article to [samuel.matey@maine.edu](mailto:samuel.matey@maine.edu) with “My Experience” in the subject line. Make sure to include your first name and hometown so we can give you credit!