



the weekly anthropocene

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



By Sam Matey, June 5 2019

Species Conservation: North Atlantic Right

Whales. The North Atlantic right whale, *Eubalaena glacialis*, is one of the most endangered whale species in the world, with only an estimated 411 individuals left. The population winters off Georgia and the Carolinas, and summers off Maine and the Canadian Maritimes. Unlike its humpback and blue whale cousins, it never fully recovered from the



CCS image, NOAA permit #14603-1

intense whaling pressures of the 20th century (which were particularly tough for them: the name “right whale” comes from the fact that it was seen as the “right” whale to hunt). The species is now primarily threatened by violent ship strikes and lacerating entanglements, especially entanglements with the ropes that attach lobster and crab traps to surface buoys. It’s gotten worse since 2010, as climate change has driven the right whales off their normal migration paths in search of their northward-shifting prey species, making it harder to anticipate where to set shipping and fishing limits. The slow-growing population seemed to get some good news last winter, when seven new calves were spotted. However, June 2019 has been calamitous. Six northern right whales died in less than a month, more than 1% of the entire species. “Wolverine,” a 9-year old male, was found dead on June 4, and “Punctuation,” a 40-year old grandmother, was found dead on June 20. (Pictured: Punctuation, in happier days, with a calf in 2016). “Comet,” a 34-year old grandfather, and an unnamed female were found dead, together, on June 25. Finally, two unnamed whales were found dead in Quebec waters on June 26 and 27. None of the dead whales were close to the species’ normal lifespan of 80 to 100 years, indicating that they did not die of natural causes. A necropsy on “Punctuation,” found that she died after collision with a ship, and ship or net encounters are the prime suspects for the other five deaths as well. In response, Canada has set lower speed limits for two shipping lanes in the Gulf of St. Lawrence, shut down the snow crab fishery early, and is working to decrease the use of “fixed gear” trap ropes. The USA has imposed a 50% reduction in buoy lines (to take effect in 2021) for fishers in right whale territory, which has drawn a lot of controversy due to its potential impact on Maine lobster fishers. However, unless we take action, we could be looking at the extinction of a sentient species right off the coast of New England, one of the most conservation-minded regions in the world. It is critically important to involve all stakeholders-governments, conservationists, and fishers-to develop a long-term strategy to allow these beleaguered whales, who survived the mass hunting madness of the 20th century, to survive the warming waters and busy shipping lanes of the 21st. For more, see tinyurl.com/y4ys9bdn.



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Species Conservation: The Ozark

Chinquapin. In the Ozark woodlands of Missouri and Arkansas, a small group of dedicated conservationists have brought an ancient tree species back from the brink of extinction. The Ozark chinquapin (*Castanea ozarkensis*), a close relative of the American chestnut, provided rot-resistant wood and protein-rich nuts to the humans and animals of the Ozarks for thousands of years. However, with the American chestnut, it fell victim to the deadly



chestnut blight fungus accidentally introduced to the US in 1904. By the 1990s, the chinquapin was thought functionally extinct, with only a few blight-ridden stumps occasionally sending up seedlings. However, in the 2000s, Missouri State Parks naturalist Steve Bost began chasing down rumors of surviving Ozark chestnuts. He eventually found 45 adult trees that were lucky enough to resist the blight (their locations are still secret), and, with incredible dedication, spent the next decade using his spare time to hand-pollinate them (even though they were miles apart!) to produce viable seeds. Now, Bost's newborn Ozark Chinquapin Foundation is raising over 1,000 young chinquapins, and genetic studies have just confirmed that some of them are blight-resistant. (Pictured above: a test plot, with the precious baby chinquapins in protective white tubes). Spectacular news! Thanks to Steve Bost's quixotic quest, the Ozark chinquapin looks set to return from the brink of oblivion to live for centuries more in the Anthropocene. For more, see tinyurl.com/y5b9oklv.

Species Conservation: The Charapa.

The giant South American river turtle, or charapa (*Podocnemis expansa*, pictured), pictured) is a critical component in the majestic forest ecosystems of the Amazon and Orinoco river basins. A vital prey and seed-dispersal species, the charapa is threatened by habitat degradation and overharvesting of its eggs and meat. Now, a paper evaluating the results of 85 individual charapa conservation projects across its range



has found that at least 147,000 females are currently protected by these initiatives, a spectacular accomplishment. Next, conservationists aim to develop an international monitoring program. Great news! For more, see tinyurl.com/yxvfbgzu.



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Species Conservation: The Creatures of the City of the Jaguar

Jaguar. In 2012, the ruins of an ancient city were discovered, shrouded in rainforest in a remote region of the Central American nation of Honduras. Known variously as the “White City,” the “Lost City of the Monkey God,” and the “City of the Jaguar,” the site is well known as an archaeological treasure, once home to a mysterious pre-Columbian civilization that might have been the equal of the Aztecs or the Maya, but whose name and culture have been lost to history. Now, it appears that the isolated ruins are also a biological treasure. When a Conservation International research team helicoptered into the “Ciudad del Jaguar” site to conduct a Rapid Biological Assessment, they found a rich, thriving ecosystem perhaps unparalleled in Central America. The researchers documented 198 species of birds, 70 mammal species, 22 amphibian species, 35 reptile species, 13 fish species, 246 lepidopteran (butterfly and moth) species, and 183 plant species, an extraordinarily high species richness. Mammals found included abundant populations of Baird’s tapir (pictured, right), white-lipped peccary, and all five Central American cat species-pumas, ocelots, margays, jaguarundis, and jaguars. Several extremely rare species were found to be present at the site, including the endangered great green macaw, the critically endangered *Reinhardtia gracilis* palm tree, and the *Odontochila nicaraguense* tiger beetle, which before this expedition was thought to be both extinct and exclusive to Nicaragua. They also rediscovered the false coral tree snake (pictured, right), and the pale-faced bat, which had not been since in Honduras since the 1960s and 1940s respectively. Finally, one of the fish species discovered, in the genus *Poecilia* (the “mollies”) appears to be a new species. In sum, the results of this expedition have made it clear that the Ciudad del Jaguar is not only an archaeological marvel, but a critical site for conservation, as one of the few intact rainforest ecosystems left in Central America. What an amazing place! For the full Conservation International report, see <https://tinyurl.com/y5nkaanu>.

