

Not easy eating green: Herbivores most at extinction risk

BY SETH BORENSTEIN
today

<https://apnews.com/dc8847c170fe16798188d609d6ee7353>



1 of 2

FILE - In this Friday, Aug. 23, 2019, file photo, female northern white rhinos Fatu, right, and Najin, left, the last two northern white rhinos on the planet, are fed some carrots by a ranger in their enclosure at Ol Pejeta Conservancy, in Kenya. Although scientists have long focused on the world's predators, a massive new study finds that herbivores, critters that eat plants, are the animals most at risk of extinction. A bit more than one in four species of herbivores are considered threatened, endangered or vulnerable by the International Union for Conservation of Nature, the world's scientific authority on extinction risk, according to a study published Wednesday, Aug. 5, 2020, in the journal Science Advances. (AP Photo/Ben Curtis, File)

Although scientists often worry most about the loss of the world's predators, a comprehensive new study finds that plant-eating herbivores are the animals most at risk of extinction.

About one in four species of herbivores, 25.5%, are considered threatened, endangered or vulnerable by the [International Union for Conservation of Nature](#) (IUCN), the world's scientific authority on extinction risk, according to a study in Wednesday's journal [Science Advances](#).

By comparison, 17.4% of the predators and 15.8% of omnivores were at risk, said study lead author Trisha Atwood, an ecologist at Utah State University.

Researchers analyzed data for 22,166 species of animals with backbones, including the type of animal (reptile, bird or mammal), geographic location, habitat and size. And in just about every way examined, they found plant-eaters were the most at risk, especially in forest ecosystems.

MORE STORIES:

- [– Astronauts: SpaceX Dragon capsule 'came alive' on descent](#)
- [– Poop scoop: Satellite images reveal Antarctic penguin haunts](#)

“The implications for this are huge,” Atwood said. “We need to think about herbivores as being kind of the poster child of extinction.”

So instead of polar bears and tigers, think of plant-eaters like rhinos and green sea turtles, Atwood said. The last male northern white rhinoceros in the wild [died in 2018](#), but scientists are scrambling to save the species with donor embryos.

The study focused on proportionality, not raw numbers of species at risk. There are many more predator species, so there are more vulnerable predators in total, but a larger share of herbivores are in trouble.

Scientists even examined the presumed diets of more than 2,000 species no longer alive and found that herbivores again had the highest extinction proportion.

Atwood went into the study thinking that the predators were most at risk. However, she said the data — which included land and water species, but not fish because of inadequate information — pointed clearly at herbivores.

Predators, she added, also are in trouble, but not as much as herbivores they often eat.

Full Coverage: [Science](#)

Extinction causes — invasive species, climate change and habitat loss — hit herbivores harder than animals with other diets, Atwood said.

Size may be part of the reason herbivores are more at risk, the ecologist said. Often, herbivores are bigger and need to eat more and require more land and their habitats are becoming smaller, she said. Predators and omnivores have wider ranges and that helps them survive.

Duke University conservation scientist Stuart Pimm, who wasn't part of the study, said his problem with Atwood's research is that it doesn't take into account the immense importance of geographic range, which is key for predators.

But University of Miami biologist Mauro Galetti, who also wasn't part of the research, said Atwood's study is important, makes sense and “changes our biased idea that conservation projects should focus mostly on top predators.”

Large herbivores are crucial, especially in places like forests, Galetti said in an email. “A world without herbivores would be a disaster for any natural ecosystem.”