## Overhunting poses extinction risk

BENNETT HALL Corvallis Gazette-Times, Oct 18, 2016



Oregon State University ecologist William Ripple and other researchers are warning that unregulated or illegal hunting is driving more than 300 mammal species toward extinction.

Hunting is pushing hundreds of mammal species ever closer to extinction, according to an international study led by Oregon State University ecologist William Ripple.

In the first global assessment of its kind, Ripple and his fellow researchers analyzed data on more than 1,100 terrestrial mammals already listed as threatened by the International Union for the Conservation of Nature.

Their conclusion: Hunting is a primary threat for 301 species, including rhinos, gorillas, chimpanzees and tigers. While the list includes several types of deer, pig and antelope, it also includes a staggering 126 primate species and 27 kinds of bats.

The problem occurs almost exclusively in developing countries in Asia, Africa and Latin America, where subsistence hunting tends to play an important economic role and environmental protections are often lax, and it is mainly associated with illegal and unregulated hunting.

Madagascar, home to a large variety of threatened lemurs and other primates, has the greatest number of mammal species endangered by hunting, followed by Indonesia, the Philippines, Brazil, Papua New Guinea, India and China.

While many of the animals are killed by subsistence hunters desperate to put food on the table for their families, others are sold on the open market for game, or "bushmeat" as it is widely known. In other cases animals are killed for body parts used in traditional medicine or ornamentation, and some are trapped alive to be sold as pets.

"People have been hunting wild animals for a long time," Ripple noted. But he also pointed out that modern firearms and motorized transportation have made large-scale hunting easier than ever before. Coupled with widespread habitat loss, global warming and other pressures on wildlife throughout the world, unchecked hunting could be enough to push some of these species over the brink.

"We're getting to the point now where we're at a crisis — an overhunting crisis," he said.

The paper, tiled "Bushmeat Hunting and Extinction Risk to the World's Mammals," is being published today in Royal Society Open Science. Ripple's 14 co-authors include academic researchers at OSU, Stanford, the University of California-Santa Barbara and universities in Gabon, the United Kingdom, Sweden, South Africa, Brazil and Australia.

While no comprehensive figures are available, the researchers found that 89,000 metric tons of bushmeat worth \$200 million is harvested each year in the Brazilian Amazon alone, with an estimated five times as much taken yearly in the Congo basin. That means overhunting threatens not only animals but humans as well, Ripple argues.

"We have over 800 million people in the world who are hungry or malnourished, and a lot of those are dependent on bushmeat," he said. "But it doesn't do them any good to drive these species to extinction."

Another aspect to consider: Some of the overhunting of threatened species is driven by organized gangs and terrorist organizations that use the profits to fuel their criminal activities.

Many of the most imperiled mammals are large herbivores and carnivores, the kind of animals that can play crucial roles in maintaining ecosystem stability — Ripple's research specialty. Losing some of those species could have far-reaching environmental consequences, he said, devastating some of the world's most iconic landscapes, from the plains of Africa to the Amazon rainforest.

"People in rich countries are connected through those cascading effects ... so it's not just a poor country problem," he said.

In their paper, the researchers call on developed and developing countries alike to come together in a five-part approach to the problem:

- Increase penalties for poaching and illegal trafficking while expanding habitat protections for threatened animals.
- Clarify individual and communal property rights for "legal wildlife users" in communities that benefit from the presence of wildlife.
- Identify more sustainable food sources, such as high-protein plant crops.
- Educate consumers worldwide about the threat of illegal and unregulated hunting.
- Provide family planning assistance to reduce population pressure on wildlife in areas where women want to delay or avoid pregnancy.

Ripple admits that addressing the problem is a daunting challenge. But he also sees signs of hope.

He points to the Convention on International Trade in Endangered Species, a legally binding treaty that has been signed by 183 nations, as well as Oregon's Measure 100, a statewide initiative on the November ballot that would ban commerce in 12 threatened species.

Ripple said he's especially encouraged by grass-roots actions such as the Global March for Elephants and Rhinos, a protest march held Sept. 24 in more than 100 cities around the world, including Portland.

Now he's hoping that his paper in Royal Society Open Science will help focus public attention on what he sees as an existential threat to hundreds of the world's mammal species.

"I don't have the answer, but one of our major goals in publishing this paper is to educate people on the significance of the problem," he said. "Until people become aware of the magnitude of this problem, there won't be any kind of strong global solution."