

## Large carnivores have lost more than 90 per cent of their range



Steve Winter/National Geographic/Getty

By **Fred Pearce**

Lions, tigers and the red and Ethiopian wolves have lost more than 90 per cent of their hunting grounds in the past 500 years. But while these charismatic hunters are up against it, hyenas are doing much better, finds the first global study of the ranges of big terrestrial hunters.

Chris Wolf and William Ripple at Oregon State University looked at historical accounts of large carnivores and maps of their preferred habitat around AD 1500, and found that they are now present in just a third of the land area they occupied back then. Of the 25 species analysed, all weighing more than 15 kilograms, 15 had lost more than half their range.

Up to nine of these species once roamed South and South-East Asia, but today large areas have lost them all. The smallest declines were in the tundra and northern forests, where the relative scarcity of humans gives bears and wolves space to hunt.

Most of the big beasts are now skulking on the margins of their former ranges, making them more vulnerable to extinction, says Wolf. But there are exceptions.

[The Eurasian lynx](#) and [Australia's dingo](#) have lost only 12 per cent of their range. Striped, spotted and brown hyenas have conceded only 15, 24 and 27 per cent respectively, and the grey wolf 26 per cent. In between, with losses of between 30 and 90 per cent, are various species of bears and big cats such as leopards, pumas and jaguars.

Not surprisingly, Wolf and Ripple found a “strong positive relationship between range contractions and rural human population density, livestock and cropland”. But again, there are exceptions.

In parts of India, leopards and hyenas persist in farmland areas where the population density exceeds 300 people per square kilometre. And there are some signs of recent recovery, often involving reintroductions organised by humans. Wolves are returning across Europe and North America, for example.

Elsewhere, smaller hunters have filled the gap created by the demise of bigger beasts. “Coyotes have had major range expansions,” Wolf told *New Scientist*, although they did not form part of the study.

### **Resilience**

Chris Thomas, an ecologist at York University, UK, says there are some grounds for optimism over the future of the planet’s carnivores. “The big picture of decline is of course right, but some more hopeful signs were missed by the study.” If wolves, wild dogs, dingoes and coyotes, which have a common ancestry, are taken together, “there has been an expansion in their range,” he says.

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Wolf says reintroductions have a good chance of success. “Many large carnivores are resilient, particularly when human attitudes and policy favour their conservation.”

But Thomas wonders whether conservationists are picking the right species, questioning plans announced last week to [reintroduce the Eurasian lynx](#) to northern England. “Of all the large carnivores, Wolf’s data shows this is the one that least needs help,” he says.

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