

In Chernobyl's post-apocalyptic exclusion zone, animals are thriving

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Bison drink on the Belarus side of the Chernobyl exclusion zone in 2006. The nuclear power plant in Ukraine exploded in 1986, and more than 100,000 people left the region — but according to a new study, the population of animals has dramatically increased. Photo: Tatyana Deryabina/Courtesy of University of Portsmouth via Washington Post

The chorus of wolf howls, long and loud, seemed to come from every direction in the darkness. The predators yipped and chirped and crooned to one another for what seemed like forever, sounds Tom Hinton had never heard before.

They sent a shiver of awe and fear down Hinton's spine.

"It was a primordial experience" that humans haven't felt in tens of thousands of years, he said.

Humans have not lived in the remote area along the Belarus-Ukraine border for decades.

They all left after a very different sound nearly 30 years earlier: the massive explosion of the Chernobyl Nuclear Power Plant in 1986, which killed dozens and drove more than 100,000 people from their homes across a 1,600-square-mile area of Ukraine and Belarus. These days, abandoned apartment

complexes in the exclusion zone where no one can live are nothing more than crumbled concrete wrecks. Vines crawl up the decaying walls of old farmhouses and break open skylights into their roofs. No one lives there.

Not humans, that is. Wildlife populations there — shaggy-haired wild boar, long-legged elk, the howling choruses of wolves — are flourishing.

Mammal Numbers Are On The Rise

That is according to a study published this week in the journal *Current Biology*. It found that mammal numbers in the exclusion zone are as high, if not higher, than in even the most protected parks in Belarus.

"That wildlife started increasing when humans abandoned the area in 1986 is not earth-shattering news," said Hinton, who studies the effect of radiation on plants and animals and is the co-author of the study. "What's surprising here was the life was able to increase even in an area that is among the most radioactively contaminated in the world."

In other words, whatever the fallout from the disaster might have been, the absence of humans was more than enough to make up for it.

"It shows ... how much damage we do," said fellow co-author Jim Smith, an environmental science professor at the University of Portsmouth.

"Not that radiation isn't bad," he added, "but what people do when they're there is so much worse."

Radiation Has Had No Effect On Mammal Populations

The study is the first real census of wild animals in the exclusion zone.

Animal numbers were low when scientists first started counting them in 1987. Because no data was taken before the disaster, scientists can't tell how much animal populations were hurt by the explosion. But the numbers of animals rapidly rose once humans left the region. Brown bears and rare European lynx — predatory cats the size of a Great Dane — quickly appeared in the forests, even though they hadn't been seen for decades before the accident. Wild boar began living in abandoned buildings. Forests replaced humans in the villages' empty streets.

Within 10 years, every animal population in the exclusion zone had at least doubled. At the same time, the same species were vanishing from other parts of the former Soviet Union. Their disappearance was likely because of increased hunting, poorer wildlife management and other economic changes.

By 2010, the last year of the census, the populations for most species were as large as in any of Belarus' four national parks. For one species, the wolves, the population was seven times bigger.

This shows researchers that long-term exposure to radiation from the explosion has had no impact on overall mammal populations.

Exclusion Zone Is Still Dangerous

This doesn't mean the zone isn't dangerous, Hinton stressed. While whole animal populations aren't dying out, individual animals might be getting sick, and the soil in areas close to the nuclear power plant is still poisonous.

The presence of wolves is particularly important. As top predators, they are a sign of the health of the entire ecosystem — if they're flourishing, that means that every other level of species, from elk and deer on down to insects and plants, must also be healthy.

Another team of researchers is currently using camera traps to count wildlife on the Ukrainian side of the exclusion zone.

One of the scientists, Nick Beresford, a radioecologist at the National Environment Research Council in the United Kingdom, praised the study and its findings. "People have said before that wildlife in the zone is flourishing," but there was no proof, he said. "This is the first study to really back it up with science."

A City Overtaken By Trees

Walking around the exclusion zone is like being in "a national park without the people," Hinton said.

Even the Soviet city of Pripyat in Ukraine, which once housed tens of thousands of workers at the Chernobyl plant, has been taken over by trees.

"When I was there 15 years ago, it looked like a city with some trees growing in it," recalled Smith. "Now it looks like a forest with some buildings in it."

For Hinton, who is currently studying the effects of the 2011 Fukushima nuclear disaster in Japan, the impact is both astounding and sobering.

"It's an amazing experience from a wildlife perspective," he said. "It's sad to see the houses and the cars and the baseball bats, and you envision the life that people had to drop and leave. But you also see wild boar running around, and you don't see that as soon as you leave the zone."

Quiz

- 1 What event had the greatest effect on wild animals in the area discussed in the article?
- (A) help from scientists
 - (B) the nuclear explosion
 - (C) the radiation exposure
 - (D) people moving away
- 2 How were scientist Nick Beresford's ideas about the wildlife in the exclusion zone affected by the study?
- (A) His ideas were changed.
 - (B) His ideas were disproved.
 - (C) His ideas were confirmed.
 - (D) His ideas were acknowledged.

- 3 Read the sentence from the section "Mammal Numbers Are On The Rise."

In other words, whatever the fallout from the disaster might have been, the absence of humans was more than enough to make up for it.

Which of the following words would change the meaning of the sentence if it replaced the word "fallout" in the sentence?

- (A) effect
- (B) impact
- (C) aftermath
- (D) development

4 Which sentence from the introduction [paragraphs 1-6] includes a word meaning "ancient" or "primitive"?

- (A) Humans have not lived in the remote area along the Belarus-Ukraine border for decades.
- (B) "It was a primordial experience" that humans haven't felt in tens of thousands of years, he said.
- (C) The predators yipped and chirped and crooned to one another for what seemed like forever, sounds Tom Hinton had never heard before.
- (D) These days, abandoned apartment complexes in the exclusion zone where no one can live are nothing more than crumbled concrete wrecks.