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STAFFAN WIDSTRAND/NPL



Jaguars roam from the southwestern United States to Paraguay, but their habitat has shrunk as agriculture and deforestation have expanded.

WILDLIFE TRADE

China's lust for jaguar fangs imperils big cats

Wildlife traffickers in South America seek body parts from protected species.

BY BARBARA FRASER

The jaguar was found floating in a drainage canal in Belize City, Belize, on the day after Christmas last year. Its body was mostly intact, but the head was missing its fangs. On 10 January, another cat — an ocelot that may have been mistaken for a young jaguar — turned up headless in the same channel.

The killings point to a growing illicit trade in jaguars (*Panthera onca*) that disturbs

wildlife experts. The cats' fangs, skulls and hides have long been trophies for Latin American collectors who flout international bans against trading in jaguar parts. But in recent years, a trafficking route has emerged to China, where demand for jaguars could be increasing because of crackdowns on the trade in tiger parts used in Chinese traditional medicine.

Wildlife trafficking often follows Chinese construction projects in other countries, because Chinese workers can send or take

objects home, says ecologist Vincent Nijman of Oxford Brookes University in Oxford, UK. "If there's a demand [in China] for large-cat parts, and that demand can be fulfilled by people living in parts of Africa, other parts of Asia or South America, then someone will step in to fill that demand," he says. "It's often Chinese-to-Chinese trade, but it's turning global."

That seems to be the case in Bolivia, where 8 packages containing a total of 186 jaguar fangs were confiscated between ▶

► August 2014 and February 2015 before they could reach China. Seven had been sent by Chinese citizens living in Bolivia. Eight more were reportedly intercepted in 2016, and a package of 120 fangs was seized in China, says Angela Núñez, a Bolivian biologist who is researching the trade.

Those packages could represent the deaths of more than 100 jaguars, although it's impossible to be sure, Núñez says. In northern Bolivia, where several Chinese companies are working, radio advertisements and flyers have offered US\$120 to \$150 per fang — more than a month's income for many local people. Two Chinese men have been arrested for trading in jaguar parts. One, detained in 2014, received a three-year suspended sentence. The other, arrested in 2016, is awaiting sentencing but failed to appear for two recent court hearings.

Worldwide, very few wildlife-trafficking cases lead to criminal sentences, Nijman says. “The deterrent is when somebody ends up in jail,” he says — but that rarely happens.

Fangs and skulls seized in Bolivia, as well as 38 fangs confiscated in Lima, Peru, in 2015, could have come from jaguars that were killed recently, or years ago. Because the cats have large territories, Núñez says that genetic studies could determine whether poached animals came from populations in Bolivia.

That also interests Brazilian biologist Thais Morcatty, who is doing her PhD research with Nijman. There is a domestic market in Brazil for jaguar skins as home decoration, but parts of the animals have also been shipped abroad

from Rio de Janeiro and São Paulo, she says.

More than a century ago, jaguars roamed forests, savannahs and scrub land from the southwestern United States to Paraguay. Deforestation and other disturbances caused by people — especially the expansion of agriculture — have cut the cats' habitat in half, says wildlife ecologist John Polisar, who coordinates the jaguar programme at the Wildlife Conservation Society in New York City.

“It’s often Chinese-to-Chinese trade, but it’s turning global.”

Central and South America. Estimates of the remaining jaguar population range from about 60,000 to nearly three times that number.

A farmer who loses a cow or calf to a predator might kill a jaguar in retaliation, even though that animal might be innocent. After habitat loss, such killings are the second-biggest threat to jaguars, says Esteban Payán, director of the northern South America jaguar programme at Panthera, a global wild-cat conservation organization. The retaliatory killings also provide a sporadic supply of animal parts to the wildlife trade, but sparse data make it difficult to know whether the incidents are isolated cases.

Measures designed to help people coexist with jaguars could reduce such killings, Payán says. In some cases, electric fences have discouraged jaguars from crossing from forests

into pastures, and solar panels that power the fences can also run some light bulbs or a small refrigerator for the farmer's family (H. Quigley *et al.* *PARKS* 21.1, 63–72; 2015). That can revolutionize life for them, he says.

Other tactics that have shown promise include putting bells on cows and installing flashing lights around pastures to help keep predators at bay. Introducing guard animals to a herd, such as burros (a type of donkey), can also discourage predators, he says.

Governments could help by providing incentives, says biologist Ricardo Moreno, director of the non-profit group Yaguará Panama. Now, a farmer who buys a cow on credit must repay even if he loses an animal, says Moreno, who mixes scientific studies and work with communities and policymakers to protect jaguars. But making loans contingent on better livestock management would benefit farmers, lenders and jaguars, he says.

Meanwhile, researchers and some government officials in Latin America are watching the wildlife trade warily. Belize's environment ministry is offering a US\$5,000 reward for information about the jaguars killed there, and Polisar's group is collecting data from around the region.

Although the links to international trafficking in Bolivia are clear, Payán worries this is “just the tip of the iceberg” of a broader trading network, because there are anecdotal reports of trafficking in other countries. Conservation groups are no match for “the violence, the money and the scale” of organized poaching rings, he says. “The potential threat is huge.” ■

UNIVERSITY WALKOUT

UK universities cope with disruption from huge strike

Pension changes spur more than 40,000 academics to walk out on research and lectures.

BY ELIZABETH GIBNEY

Britain's leading research universities are coping with the disruption wrought by a nationwide strike, as academics protest against changes to their pensions. The walkout, which began on 22 February, is one of the largest by university staff in the country's recent history and is disrupting scientific experiments, conferences and lectures.

More than 42,000 academics — members of the University and College Union (UCU) — were called out on strike from 64 institutions across the United Kingdom. About 25,500 of those members are research staff, and the

dearth of lecturers is predicted to affect more than 1 million students. Fourteen days of strikes are scheduled over four weeks.

Academics are walking out over planned changes to the Universities Superannuation Scheme, the main pension fund for 190,000 faculty members and staff at many of Britain's older, research-intensive universities. A 2017 valuation found that the fund had a growing deficit of £12.6 billion (US\$17.6 billion) — one of the largest of any private UK pension scheme. Universities UK, which represents the academic employers, says that the fund will be difficult to sustain without reform. It proposed changes — pushed through in January — that would see

pension income go from having a guaranteed element to being entirely dependent on investment return. According to financial models commissioned by Universities UK, pension recipients would lose £2,000–5,000 of income a year, depending on salary. The UCU puts the loss at as much as £10,000 a year, and says that the proposals are based on an overly pessimistic view of the fund's deficit. That position is backed by a growing number of UK institute heads, who have broken ranks on the issue.

As *Nature* went to press, the two sides were expected to begin fresh talks on 27 February. Universities UK told pension-scheme members in a letter that it would be open to reintroducing