

Pangolin DNA study links local wild meat markets to global trafficking networks



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Pangolin scales and other body parts trafficked internationally appear to come from the same areas that supply the animals for local wild meat markets, a new [study](#) has found. It created a DNA database and location-prediction model for three threatened species: the white-bellied (*Phataginus tricuspis*), Sunda (*Manis javanica*) and Chinese (*Manis pentadactyla*) pangolins.

Pangolins are the world's most trafficked wild mammals; estimates suggest [more than 1 million](#) animals have been captured from the wild over the past decade. The new database contains DNA information from 711 samples collected from museum specimens and seized pangolin parts.

"Our dense sampling of the white-bellied pangolin ... revealed that both forms of trade (domestic and international) draw from the same source regions," the study's authors wrote. "This overlap is also found, albeit less pronounced, in the two Asian species and suggests a shared supply chain and common actors at the point of pangolin harvest, and possibly beyond."

In Cameroon, DNA samples from the [endangered](#) white-bellied pangolin showed that international seizures in China and Europe overlapped with the same sourcing locations for the two largest domestic wild meat markets in Cameroon: the capital Yaoundé, and the port city of Douala.

The study identified the Ebo Wildlife Reserve in western Cameroon as a main sourcing site for both domestic markets, as well as international traffickers. Other key sourcing areas include the forests near the southern city of Ebolowa, near the border with Equatorial Guinea, and near the town of Eseka, about 100 kilometers (60 miles) southwest of Yaoundé.

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Heighton, from the University of Caen Normandy in France and a member of the Pangolin Specialist Group at the IUCN, the global wildlife conservation authority, told Mongabay by email.

For the Sunda and Chinese pangolins, both [critically endangered](#), there were fewer samples available, but researchers could still trace their approximate source locations.

Seizures of Chinese pangolins carried out in Yunnan province, southern China, for example, were traced back to Myanmar's Sino-Himalayan region, while others came from northeastern India, Taiwan and Guangdong, another southern Chinese province. The study found that Sunda pangolins were largely sourced from southwestern Borneo.

"We can only hope that similar work can be done in the future for the other five or six species of pangolin," Vincent Nijman, head of the Oxford Wildlife Trade Research Group at Oxford Brookes University in the U.K., who wasn't involved in the study, told Mongabay by email.

However, Nijman said the study may be limited in its enforcement value because prosecutions are typically brought where shipments are seized, not where pangolins were poached. The source location information also can't be used for reintroductions, since pangolins are rarely trafficked alive, Nijman said.

Banner image: White-bellied pangolins captured in southeastern Nigeria and destined for trade. Image courtesy of Alex Moore.

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