

# African Vultures Threatened by Lead Poisoning

*Internationally, concern has for a long time been expressed about the toxicity of lead from cartridges and bullets used for hunting birds and mammals; studies have mainly described cases from Europe and North America. But a new report has shown that African White-backed Vultures in Botswana are ingesting lead fragments in the food they scavenge from hunted game. It is highly likely that other African vultures and other scavenging birds are also affected. There is a strong case to be made for the use of lead-free ammunition in Africa, and hunters should demonstrate their commitment to the African environment and its conservation by their leadership in using non-lead ammunition.*



Most people who have the privilege of visiting wild places in Africa will have looked up in awe and respect at the big birds high in the blue sky, soaring way above the earth in their quest for their next meal. Vultures are part of wild Africa – their ecosystem services are to quickly remove decaying bodies and flesh from the environment, so curtailing the proliferation

of bacteria and viruses, and the flies that carry them around.

Vultures are pretty smart creatures, and superb aviators, riding the thermals to travel hundreds of miles every day in their search for food. They keep an eye on their neighbors in a network of airborne observers. Should one of their associates spot a carcass, or a crow signaling interest on the ground below, that bird will

immediately lose altitude to take a closer look. The network of observers will be drawn to that hole in the net, and like the knots of a net being pulled down, they fly towards the pot of gold at the end of the rainbow. This is why a ground observer would see first one, then three, then fifty and then a hundred vultures appear miraculously from the sky and descend to feed on a carcass.

Vultures are long-lived, slow-breeding birds, and a pair must survive for many years to replace themselves in the wild. 'Modern' Africa is conspiring to shorten the lives of vultures, in many ways. Electricity transmission and distribution networks kill vultures by collision with wires or electrocution on supporting structures. The new curse of renewable energy is killing vultures by impacts with spinning wind turbine blades, or electrocutions and collision on the new powerlines to take the "clean, green energy" to the

nearest grid connection. Then we have the poisoners, the farmers who lace bait with poison to kill predators; the poachers who poison carcasses to stop the vultures from being used by rangers to see where they are operating, and the suppliers of African traditional medicine who can find a ready cash market for vulture parts in the towns and cities of the continent.





White - backed vultures.

**Association between hunting and elevated blood lead levels in the critically endangered African white-backed vulture *Gyps africanus***

By Rebecca Garbett, Glyn Maude, Pete Hancock, David Kenny Richard Reading & Arjun Amar. *Science of the Total Environment*. 631–632 (2017). © 2017 Elsevier B.V. All rights reserved.

**Abstract**

Lead (Pb) toxicity caused by the ingestion of Pb ammunition fragments in carcasses and offal is a threat to scavenging birds across the globe. African vultures are in critical decline, but research on whether Pb exposure is contributing to declines is lacking. In Africa, recreational hunting represents an important economic activity; however, Pb in leftover hunted carcasses and gut piles represents a dangerous food source for vultures. It is therefore important to establish whether recreational hunting is associated with Pb exposure in African vultures. We explored this issue for the critically endangered white-backed vulture (*Gyps africanus*) in Botswana by examining their blood Pb levels inside and outside of the hunting season, and inside and outside of private hunting areas. From 566 birds captured and tested, 30.2% birds showed elevated Pb levels (10 to <45 µg/dl) and 2.3% showed subclinical exposure (≥45 µg/dl). Higher blood Pb levels were associated with samples taken inside of the hunting season and from within hunting areas. Additionally, there was a significant interaction between hunting season and areas, with Pb levels declining more steeply between hunting and non-hunting seasons within hunting areas than outside them. Thus, all our results were consistent with the suggestion that elevated Pb levels in this critically endangered African vulture are associated with recreational hunting. Pb is known to be highly toxic to scavenging birds and we recommend that Pb ammunition in Botswana is phased out as soon as possible to help protect this rapidly declining group of birds.

There is a large amount of information on the Internet about lead-free ammunition, such as <http://www.leadfreehunting.com/conservation>.

As might be expected, there are widely divergent views on ammunition, and while I am certainly very ignorant on this subject, the following article did catch my eye:

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**Lead-Free Hunting Rifle Ammunition: Product Availability, Price, Effectiveness, and Role in Global Wildlife Conservation**

By Vernon George Thomas

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*AMBIO: A Journal of the Human Environment. Published by: Royal Swedish Academy of Sciences.*

**Abstract**

Proposals to end the use of lead hunting ammunition because of the established risks of lead exposure to wildlife and humans are impeded by concerns about the availability, price, and effectiveness of substitutes. The product availability and retail prices of different calibres of lead-free bullets and centre-fire rifle ammunition were assessed for ammunition sold in the USA and Europe. Lead-free bullets are made in 35 calibres and 51 rifle cartridge designations. Thirty-seven companies distribute internationally ammunition made with lead-free bullets. There is no major difference in the retail price of equivalent lead-free and lead-core ammunition for most popular calibres. Lead-free ammunition has set benchmark standards for accuracy, lethality, and safety. Given the demonstrated wide product availability, comparable prices, and the effectiveness of high-quality lead-free ammunition, it is possible to phase out the use of lead hunting ammunition world-wide, based on progressive policy and enforceable legislation.

I recently had a very encouraging discussion with a friend who is a hunter and also a passionate conservationist with a deep concern for the future survival of vultures in Africa. He told me that he uses only lead-free bullets as a matter of principle. His passion for ethical hunting means that he will not contribute to the lead poisoning crisis faced by African vultures. If lead-free ammunition is a bit more expensive, he is willing to make that small contribution for the welfare of the big birds in the African blue sky.

My message to our esteemed readers? Please think about using lead-free ammunition on your next African hunting experience. It may be just a small gesture, but if you spread the word, it could become very important. Of course, lots of lead is going to be shot into African animals in the foreseeable future, but if YOU take the decision not to contribute to this avoidable threat to the big birds, their soaring spirits will look down on you as you walk under African skies, and thank you for your part in the greater scheme of things.

Vultures feature high in African beliefs in their spiritual and medicinal powers.

Lead poisoning in scavenging birds was highlighted by the near-extinction of the California Condor, brought back from the brink by one of the most amazing success stories in conservation history. Having been somewhat involved in this drama, and knowing a number of the fine people involved, is of special significance to me. Lead poisoning turned out to be a major factor in the decline of the condors, and lead ammunition may not be used in any parts of the USA where the California Condor may forage.

Now we have new evidence from Botswana that African White-backed Vultures are also at risk of lead poisoning.

*Photos of African White-backed Vultures kindly donated by Andre Botha of the Endangered Wildlife Trust.*

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*Lead-free ammunition from Barnes Bullets.*

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