

VSG STATEMENT ON THE ROLE OF VULTURES IN DISEASE TRANSMISSION



The plight of vultures and condors is quickly gaining attention worldwide. The ecosystem services provided by these birds and their position as apex scavengers offers a compelling narrative for their conservation, especially given that their public perception is otherwise summed up in a single word, 'disgusting'. As representatives of the IUCN Vulture Specialist Group we are seen as experts on the role of vultures/condors in providing ecosystem services and in particular, any role they may play in reducing disease transmission.

As the media attention on these birds increases, and as we all compete for limited conservation funding, the story often being told concerning their importance in reducing disease transmission is becoming increasingly distant from the science and evidence base at hand. While it is true that there is evidence of the role vultures play in limiting disease transmission between mammals at carcasses (Houston & Cooper 1975, Ogada et al. 2012), demonstrating that vulture declines have caused an increase in disease transmission has proved far more difficult and is mainly circumstantial. Because of this, we as knowledgeable VSG members should urge caution about linking vulture declines to the prevalence or increase of some relevant diseases (e.g. anthrax, botulism), as currently there is little or no scientific evidence to support this. Similarly, we should avoid links between vultures and other diseases (e.g. brucellosis, tuberculosis, cholera, malaria, etc.) where there is essentially no ecological or epidemiological basis for doing so.

In the case of rabies in India, some clarification is needed: It is clear that feral dog populations increased during the main vulture decline (by 2003), by about 30%. The increase in dogs is approximately consistent with what would be expected from the additional number of dogs that the carrion no longer being eaten by vultures would support. This agreement does not prove that the vulture decline caused the increase in dogs, but it seems quite likely that it did. Any increase in dogs, the main rabies vector, can have implications – according to World Health Organisation reporting in 2019, there are 7,000 human cases of rabies annually in India. But scientifically demonstrating a causal link between dog numbers and the risk of rabies in humans has been difficult, at least in part due to serious data deficiency. However, the idea that the vulture decline led to increases in the costs of controlling dog numbers and of anti-rabies treatment of humans remains a plausible hypothesis. As experts and scientists we must support and highlight the reality that:

- The ecology and transmission of diseases is a complicated subject
- One disease cannot be substituted for another in order to support assumptions
- To make general pronouncements that vultures can limit the spread of a range of diseases is at best unsupported.
- There is an urgent need to better assess and quantify the role that vultures play in disease ecology pertaining to a range of diseases that impact wildlife, livestock and man.

As VSG members we should be telling the important story of the role these birds play in providing key ecosystem services without making statements that lack scientific evidence. We should adhere to a high level of scientific integrity on this issue.

We support the use of the following statement in regards to this issue:

Vultures likely help to limit disease transmission at carcasses.

More conclusive evidence is needed in support of vultures' ability to limit the spread of specific diseases.

We call for more **attention and studies** testing the role of vultures as both direct (by controlling the abundance of the disease) and indirect (by reducing the substrate on which the pathogen grows) disease regulators.

References

Houston, D.C. and Cooper, J.E. 1975. The digestive tract of the whiteback griffon vulture and its role in disease transmission among wild ungulates. *Journal of Wildlife Diseases* 11: 306-313.

Ogada, D.L., Torchin, M.E., Kinnaird, M.F. and Ezenwa, V.O. 2012. Effects of vulture declines on facultative scavengers and potential implications for mammalian disease transmission. *Conservation Biology* 26: 453-460.

If there is a need to refer to the above statement, we propose the following:

IUCN Vulture Specialist Group (2020). VSG statement on the role of vultures in disease transmission. (to be posted on VSG website once launched)