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## Diclofenac leading to endangering of vultures and as vet medicine

**Syed Muhammad Khan**

University of Education Lahore, Pakistan

The Oriental white-backed vulture (OWBV; *Gyps bengalensis*) was once one of the most common raptors in the Indian subcontinent. A population decline of >95%, starting in the 1990s, was first noted at Keoladeo National Park, India. Since then, catastrophic declines, also involving *Gyps indicus* and *Gyps tenuirostris*, have continued to be reported across the subcontinent. Consequently these vultures are now listed as critically endangered by BirdLife International. In 2000, the Peregrine Fund initiated its Asian Vulture Crisis Project with the Ornithological Society of Pakistan, establishing study sites at 16 OWBV colonies in the Kasur, Khanewal and Muzaffargarh-Layyah Districts of Pakistan to measure mortality at over 2,400 active nest sites. Between 2000 and 2003, high annual adult and subadult mortality (5-86%) and resulting population declines (34-95%) (ref. 5 and M.G., manuscript in preparation) were associated with renal failure and visceral gout. Here, we provide results that directly correlate residues of the anti-inflammatory drug diclofenac with renal failure. Diclofenac residues and renal disease were reproduced experimentally in OWBVs by direct oral exposure and through feeding vultures diclofenac-treated livestock. We propose that residues of veterinary diclofenac are responsible for the OWBV decline.

### Biography:

S.M. Khan is currently pursuing an MS in Zoology from the University of Education, Lahore, Pakistan; he has, in the past, volunteered for WWF-Pakistan and written extensively on conservation issues and challenges in WWF-P's *Natura* magazine, *Mashable Pakistan*, and on several Medium Blog Publications