

BZU's zoologist on vulture decline mystery

# Call for research on veterinary drugs' effects on humans

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MULTAN, Jan 30: The Ornithological Society of Pakistan (OSP) and the Institute of Pure and Applied Biology of the Bahauddin Zakariya University have played a pivotal role in resolving the mystery of drastic decline in population of oriental white-backed vultures in Pakistan and India.

OSP President Emeritus and BZU associate professor Dr Aleem Ahmed Khan told *Dawn* that entire fieldwork of the project, Indian vulture crisis, was handled by the Ornithological Society in aid with the Zakariya University.

Dr Khan, who has recently been adjudged the best zoologist of the country for the year 2002 by the Pakistan Academy of Sciences, said that though the Birds' Conservation Nepal and the Bombay Natural History Society of India were the partners in the scientific research funded by the Peregrine Fund of USA and the Royal Society for the Protection of Birds, UK, to know the causes of the rapidly diminishing population of the oriental vultures in South Asia, it was the OSP that carried out the laborious task of fieldwork in a "hostile environment where people ridicule you when you talk about the conservation of vultures."

He said the OSP partners in research in India and Nepal could not get permission from their respective governments to send samples of the tissues of vital parts of the affected vultures to the laboratories in USA while the OSP was given permission to export samples for veterinary diagnostic investigation to the Washington State University by the National Council for the Conservation of Wildlife and, thus, the Peregrine Fund and the OSP were instrumental in reaching the breakthrough conclusion that the use of non-steroidal anti-inflammatory drugs (NSAIDs) in livestock was causing a catastrophic ecological damage.

Dr Khan said the OSP was established in 1993 in Dera Ghazi Khan district and in October, 2000, it launched the 'Pakistan vulture crisis' project with the collaboration of the Peregrine Fund.

The OSP established some 16 oriental white-backed vulture (OWBV) colonies in the districts of Kasur, Khanewal, Muzaffargarh and Layyah to monitor mortality rate at over 2,400 active nest sites.

He said the link between foreign and the local scientists remained merely through e-mails and telephonic conversations for over a

year after the 9/11 as no one from abroad was inclined to visit Pakistan. During this period, the professor and his students Shakeel Ahmed, Jamshed Chaudhry, Shahid Mahmood and Ahmed Ali at the BZU Institute of Pure and Applied Biology worked diligently to record as much data as possible through field studies.



"Once we did post-mortem and necropsy of the affected OWBVs in a laboratory for 75 consecutive days," Aleem Khan said.

A majority of the OWBVs they examined had died of renal failure and thus the researchers hypothesized that the ingested veterinary pharmaceuticals might be responsible for renal disease as the primary source of food for OWBVs in Pakistan was the dead domestic livestock.

Dr Khan's team conducted survey of about 74 veterinarians and veterinary pharmaceutical retailers in the first phase of their study and about 84 in the second to identify the drugs that were toxic to kidney and absorbable orally as well and the only drug that met the criterion was appeared to be diclofenac. He said the drug was available on counters of all the retailers surveyed in the study while 77 of them said that they sold diclofenac daily. They also told the investigators that the drug had become

available for the few years for veterinary use.

"Later experiments found high diclofenac residues in the OWBVs dying of renal disease," he said.

Calling for research to know the affects of NSAIDs on humans also, Dr Khan feared the drugs might be one of the causes of growing kidney problems.

He said the OSP, Peregrine Fund, BNHS, RSPB, BCN and BirdLife International later on endorsed the findings based on the data collected by the Ornithological Society from 2000 to 2002. He said now a ministerial summit of the SAARC countries was scheduled to be held in Nepal on Feb 5 and 6 to sign a memorandum of understanding to ban the use of diclofenac and other NSAIDs for veterinary purposes.

He said the American assistant secretary of state on environment was also scheduled to attend the summit besides the representatives of IUCN and WWF.

He said the OSP had established a 'vultures' restaurant' at Toawala in Kabirwala tehsil of Khanewal district in order to provide contamination-free food to the OWBVs and they had even recorded visit of about 300 vultures in a day at the restaurant.

He said the restaurant experience was doing well and the OSP wanted to expand to other OWBV colonies as well. He said currently they were relying mostly on donkeys as safe food for the threatened population of OWBVs. Among other measures to conserve OWBVs, Dr Khan said captive breeding facilities should be established in Punjab and Sindh besides launching an awareness campaign in the areas identified as OWBV colonies. He said the people should have to realize the importance of vultures in keeping the environment clean otherwise if they disappeared once for all then dogs and jackals would be left as the only scavengers and this phenomenon could cause epidemic of rabies and anthrax in human beings.

He said the Toawala population of OWBVs was perhaps the largest in the world of the oriental vultures. He said that recently the OSP had initiated a project for another endangered specie of vultures called long-billed vulture and had identified their colony having about 475 active nests at Khrunjhar hills in Nangarparkar area of the Sindh province.