

Vultures in South Asia

Aminur Rahman*

Introduction:

There are eight species in the genus *Gyps*. *Gyps africanus*, *G. coprotheres* and *G. rueppelli* in Africa; *G. bengalensis*, *G. indicus*, *G. tenuirostris*, *G. himalayensis* in Asia; *G. fulvus* in Europe, Africa, and Asia. They are all scavengers, feeding primarily on carcasses of large ungulates and nesting and roosting on cliffs or in trees. They use economical soaring flight to travel long distances from nests and roosts in search of ungulate carcasses (Houston, 1974; Ruxton and Houston, 2004).

Densities of *Gyps* vultures can be high in areas with suitable breeding habitat and abundant carrion. An extreme example is *G. bengalensis*, which often lives in close association with humans. During the 1970s and early to mid 1980s, densities of 12 nests/km² were recorded at Keoladeo National Park, Rajasthan, India (Prakash, 1989), and there were nearly 3 nests/km² in the city of Delhi (Galushin, 1971), where flocks of several thousand birds were present at carcass dumps. As recently as 1985, *G. bengalensis* was regarded as "possibly the most abundant large bird of prey in the world" (Houston, 1985). Following the recent population crash in *Gyps* species across the Indian sub-continent, three other species, *G. bengalensis*, *G. indicus*, and *G. tenuirostris*, are now threatened. (BirdLife International, 2000).

Gyps bengalensis is very common species on the Indian subcontinent. It regularly occurs in Pakistan, India, Bangladesh, Nepal, Bhutan, Myanmar, Thailand, Laos, Cambodia, and Southern Vietnam. It formerly occurred in Southern China and Malaysia but is now extinct in that region. It has also been found in southern and central Afghanistan, mostly in the southern area but has also been sighted in the central part of Afghanistan. In Pakistan, *G. bengalensis* is found mostly in the Indus valley and along the Himalayas to Assam valley and the southern parts of the Assam hills. (BirdLife International, 2004; Amadon and Brown, 1968; Rasmussen and Anderton, 2005).

White-rumped vultures are often found near human habitation. They occur in temperate areas, in plains and in hilly regions. *Gyps bengalensis* is generally found in open areas and fields enclosing scattered trees. White-rumped vultures feed mostly on the ground, but roost and nest in trees and cliffs, and spend much of their time soaring on wind currents searching for carrion. Nests are typically 2 to 18 meters above the ground.

White-rumped vultures are medium-sized, dark vultures. Adults are 75 to 85 cm tall, their wing span is 180 to 210 cm, and their weight ranges from 3.5 to 7.5 kg. The sexes are approximately

equal in size. Adults are darker than juveniles, with blackish plumage, a white neck-ruff, and a white patch of feathers on the lower back and upper tail. During flight, the white underwing coverts are highly visible. Usually the eyes are a yellowish brown colour and the legs are blackish. The bill is short, deep, and stout.

Immature *G. bengalensis* are dark brown and the lower back and rump area are brown rather than white. The underwing coverts are dark brown. Eyes are dark brown and the legs are blackish but lighter than the adult. Generally, adults tend towards black colouration, while younger individuals are browner. All *G. bengalensis* can be distinguished by the white bar located on the underside of the wing. (BirdLife International, 2004; Amadon and Brown, 1968; Grubh, 1974; Rasmussen and Anderton, 2005).

White-rumped vultures breed once yearly from October to March laying one egg with hatching period from 45 to 52 days and fledging periods from 2-3 months. Mating occurs at the nest or on a branch very close to the nest. Mating is monogamous, at least within seasons. Breeding colonies are built on large trees and rock cliffs. Nesting trees must have well-spaced branches so that the bird has room for movement. Only one egg is laid in each clutch. Incubation usually lasts 45 to 52 days and both sexes participate in this process. The newly hatched chick is about 15cm. Young remain in the nest for 2-3 months, with both parents regurgitating food for the nestling during that time. The young remain in the nest for two to three months after hatching. Adults bring a carcass to the newborn and feed it a few times a day. After about 15 days, parental care is minimal. The whole breeding cycle lasts six months. (Amadon and Brown, 1968).

Food Habits and predation by other animals

White-rumped vultures feed almost exclusively on the remains of dead animals, regardless of whether it is fresh or putrid. Many populations of *G. bengalensis* forage through dumpsters for food. White-rumped vultures also feed on fish from lakes that have dried out. In India these vultures eat mainly cattle and human remains. When these vultures feed, they tear open the flesh with their beaks and start feeding from the supple flesh near the tail. They fight over the food between themselves. White-rumped vultures will gorge themselves with carrion if given the chance, leaving them unable to fly. (Amadon and Brown, 1968; Dharmakumarsinhji, 1955; Prakash, 1989). In Bangladesh, white-rumped vultures are known to

*Former Curator of Dhaka Zoo, Bangladesh

build nests at lower heights than normal. Because of this, eggs may be taken by lizards, pythons, and other carnivores. Also, humans may be a threat to *Gyps bengalensis* because of the usage of vultures as a source of medicines. A very small number of this species has been captured for pets and for display in circuses. Normally they are not hunted for food.

Conservation Status

Threats to *Gyps bengalensis* include disease, pesticides, environmental contamination, poisoning, reduced food availability, calcium deficiency, reduced nesting habitat, nest predators, hunting, and aircraft strikes. DDT and HCH pesticides have been banned in India but are still extensively used. High levels of these two pesticides have been found in tissue samples in carcasses. Breeding declines of this species seem to be congruent with pesticide usage, however more recent studies have established a strong link between catastrophic Asian vulture declines and consumption of carcasses of animals treated with the veterinary drug diclofenac. Populations of white-rumped vultures have declined by as much as 95% in Pakistan and India. Populations in southeastern Asia disappeared in the early 20th century, disappearing altogether from Malaysia and southern China. (BirdLife International, 2004; Grubh, 1973; Prakash, 1999; Wells, 1999)

To preserve and protect these endangered species by taking the following actions.

- 1). Ban Diclofenac use Meloxicam drug. (Indian government banned manufacture in 2006)
- 2). Awareness and educational campaign.
- 3). Establishment of captive breeding for vulture
- 4). Analysis of sick vulture specimen.
- 5). Monitoring of vulture population.

Captive breeding of vultures

Three species of Asian vultures could become extinct within 10 years. A captive breeding programme is probably the last hope for saving vultures once widespread across India, Pakistan and Nepal. In Pinjore, Haryana, the white-backed vulture, one of the species found in India, has been bred in captivity for the first time at the Vulture Conservation Breeding Centre of the Bombay Natural History Society (BNHS) and the Forest Department of Haryana at Pinjore, according to Dr Vibhu Prakash. On March 26th, 2008 a vulture chick hatched at the Vulture Conservation and Breeding Centre at Pinjore after a pair laid an egg on the third year in a row in captivity. Conservationists add that it is vital for more captive breeding centers to be built and long term plan for the project is to breed vultures in captivity for release in the wild when they are ready.

In Bangladesh at Dhaka Zoo two eggs of White-backed vulture have hatched in the year of 2005 and in 2008 (02/02/2008) bringing the number of captive Bengal vultures in Dhaka Zoo to 5.

The compounder provided the birds with nesting materials and also a different and stronger diet consisting of more lean meat. These measures are felt to have led to the successful laying, hatching and survival of Bengal vultures in Dhaka zoo.

