Successful Rescue and Rearing of Indian Long-billed Vulture *(Gyps indicus)* at Jodhpur Zoo, India.

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Introduction

The vulture comes under the order *Falconifones* in the family: *Calhartidae*, which covers New World vultures and the family *Accipitidae* which covers Old World vultures. The New World vultures are distributed from Southern Canada to Tierra del Fuego and up to the Falkland Islands, and the Old World vultures distributed in Africa, Europe and Asia. Although the Old World vultures strongly resemble their New World counter parts in appearance and behaviour, they are not related. The subfamily *Aegypinae* contains 15 species of Old World vultures: out of which 8 species are reported in India (Ali and Ripley 1983), seven species have been reported and observed in and around Jodhpur on the fringe of Great Indian Thar Desert are King vulture *(Sarcogyps calvus)*, Cinereous vulture *(Aegypius monachus)*, Egyptian vulture *(Neophron percnopterus)*, Eurasian griffon *(Gyps fulvus)*, Himalayan griffon *(Gyps himalayensis)*, Long-billed vulture *(Gyps indicus)* and White-rumped vulture *(Gyps bengalensis)* (Name of all species - Chhangani and Mohnot, 2001). Four species King vulture (KV), Long-billed vulture (LBV), White-backed vulture (WBV) and Egyptian vulture (EV) are the residents, whereas Eurasian griffon (EG), Himalayan griffon (HG) and Cinereous vulture (CV) are winter visitors seen in and around Jodhpur city from October to the month of March (some time up to half of April).

The number of vultures around Jodhpur gradually starts increasing from the month of September and reaches to peak in the month of December to February. The breeding species start to occupy their old nests or in some cases start building new nests from September onwards.

Except LBV remaining three species WBV, KV and EV nest on large or medium trees. LBV usually nests on the cliffs of the mountains on steep rock on edges and slopes to keep other animals and predators away from the nests. Generally one single egg, average size 90 x 70 mm is laid in the month of

Fig. 1: Injured chick of Long-billed vulture at Arna Hills

Fig. 2: Transportation of Vulture chick by author

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November. The incubation period is about 45 days. Young nestlings feed on the regurgitated pieces of flesh from the parents until they leave the nest and start feeding independently.

In the last few years, the breeding population of long-billed vulture and their chicks are facing serious threats of habitat loss and biotic pressures. Due to which every year 8-10 chicks in and around Jodhpur are found fallen from the nesting sites and are killed or injured as victims of dogs and other animals. Declining number of safe nesting and roosting site is the main reasons for the decline of the vulture population in and around Jodhpur city. This is mainly due to development activities by humans, encroachment, tree cutting and mining. The insufficiency of good and safe nesting site reduces the breeding success and increases the chick's mortality of the resident species in the area. Similarly, this scarcity of nesting sites increases intra and interspecific competition to occupy nests. During this interaction many times chicks and juveniles fall from the nests and are killed or injured due to above-mentioned reasons.

But, some of them are lucky enough, and come to my notice during the regular vulture population surveys. I take them to the veterinary hospital and after necessary treatment keep them in Jodhpur Zoo for few months and then release after recovery.

Observations

On April 4, 2002 at 6.30 pm. I saw an injured chick of Long-billed Vulture *(Gyps bengalensis)* in the Arna hills, 20 km from Jodhpur city (Fig. 1). The chick was completely inactive and showed no reaction to me when I approached it. Around the chick, many sticks and twigs were seen, the nest of vulture was just 20 meters from the ground above the chick , which clearly showed that chick was thrown forcefully along with the nest. I went back to my jeep and brought surgical gloves to pick up the chick and brought the chick to my jeep.

Transportation

The distance from Arna to the veterinary hospital is about 22 km. To avoid bruises or any injuries during the transportation, I put the vulture chick on the front seat of the jeep. It provided sufficient space for chick to move freely and comfortably, and

Fig. 3: Oral feeding of electrol powder with the help of syringe

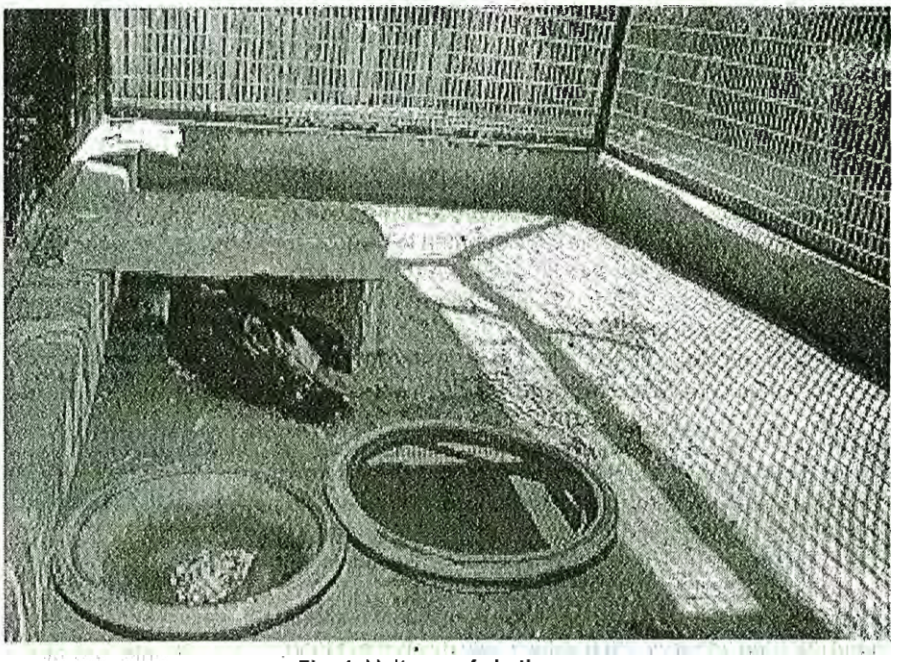

Fig. 4: Vulture safe in the zoo.

Feeding of meat pieces by hand to chick

also it did not have any sharp edges. I had to drive slowly and skillfully to avoid jolting and swerving. I started from Arna at 6.45 pm and reached the veterinary hospital at 7.35 pm. (Fig. 2). It took 50 minutes to travel a distance of 22 km . During transportation, the windows of the jeep were kept open to let in fresh air. The chick's behaviour during transportation was quite normal. The chick showed no activity, no vocalization,.etc. and just held his neck on the shoulders and sat quietly, trying to put its neck in some dark place or under its wings.

Treatment

At 7.50 pm Dr. Bhanuprakash Chaddha and his Assistant Mimbaram Chaudhri at State Government Veterinary Policlinic, Jodhpur examined the vulture chick and gave him water with Electrol powder with a syringe (Fig. 3). Then at 8.15 pm they gave it life saving drugs Dexona 2 ml. and vitamin polibion intramuscularly and kept the chick under observation for an hour. During this time, the chick flapped its wings twice, made sounds and tried to fly away. After this, on the advice of the doctor, I took it to Jodhpur Zoo.

Shifting to Zoo

At 9.30 pm I took the vulture chick to the jeep for shifting it to Jodhpur Zoo, which is about one kilometer from the veterinary polyclinic. At the Zoo, the chick was shifted to an iron cage (W 6.3 X K 10.2 X H 4.9 feet). This cage seemed to be good for vulture chick to move freely and flap its wings (Fig. 4). After shifting, I gave the chick 10 ml. of electrol powder in mineral water with the help of plastic syringe without needle. We did not give any food that day (April 4, 2002), except electrol powder and medicines twice. The chick was left overnight in the cage.

Feeding

The next day (April 5, 2002) morning at 7.30 am we offered the chick small pieces (about 100gm) of buffalo meat in a sand pot. The chick did not even touch the food, probably because he was too young to feed by himself. Then we gave him small meat pieces in his beak by force-feeding (Fig. 5). Just after 3-4 pieces, the chick started taking food by himself. After feeding about 60-70gm meat we left him for whole day without food, except for the same 10 ml. electrol power in water in the afternoon. On the next day I brought a wooden forceps and cut it in theh shape of a beak of a bird. When food was offered with this wooden forceps to the chick, he picked the food from the forceps very easily (Fig. 6).

This practice was successful and used for next 5 days, after which the chick start feeding by, himself from the sand pot (Fig. 7) and also to drink water.

After 15 days when the chick was completely normal in its activities like feeding, drinking, defaecating, flapping of wings, vocalization, etc. we increased the diet of the chick from 100 gm. to 150 gm meat per day and after 30 days we increased the diet up to 200 gm. which we want to continue up to the release of the chick in the next season when all other vultures came to Jodhpur.

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Fig. 6: Feeding the vulture chick by wooden forceps

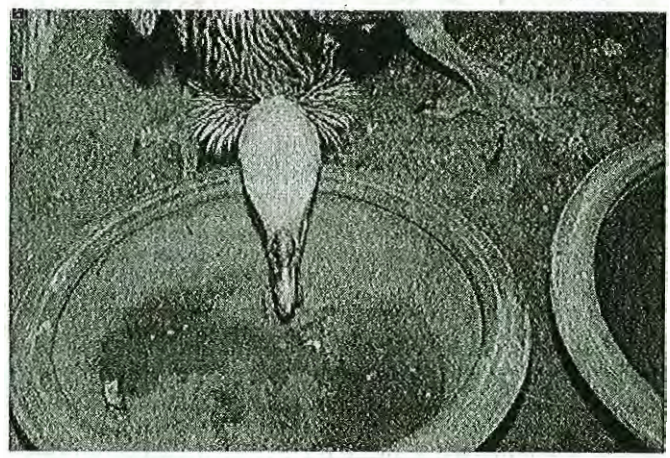

Fig. 7: Vulture chick eating unaided.