

Uncertain future for Alpine bonecrushers

Bernice Wuethrich, Zurich

BEARDED vultures, the great bonesmashing scavengers of the mountains, are back in their native Alps after a century-long absence. Since 1986, biologists have released 51 captive-bred bearded vultures (or lammergeiers) into the Alpine environment. Yet despite their enormous efforts, the bird's survival remains uncertain. This summer, Nina, a six-year-old female vulture, was shot while soaring above a French hamlet, highlighting the bird's precarious position.

A major problem is that no one knows just how many of the 51 introduced birds survive, or whether those that do will be able to make the transition from an assortment of solitary juveniles to a self-sustaining population.

Last week, biologists from the Swiss arm of the World Wide Fund for Nature (WWF) and the University of Zurich met to discuss ways to keep tabs on the birds and help to ensure their success. "Our aim is to increase biodiversity by one species in the Alps," declared Heinz Stalder, a biologist with WWF-Switzerland.

Ornithologists warn that the birds are entering a critical phase—many of them, released as three-month-old fledglings, are just now reaching sexual maturity at six years of age. Only when they begin to breed will researchers know if they are likely to establish an independent population. Although none of the birds has yet laid an egg, observers have spotted three

pairs beginning courtship behaviour: two in France and one in Austria.

Conservationists are also concerned about the vultures' mortality rate. Although only four are known to have died, including one caught in an avalanche and another killed by a power line, up to a third are unaccounted for, according to Christophe Coton, a French biologist.



Homeward bound: captive-bred vultures ready for release

Michele Depraz/WWF

The birds are difficult to track, partly because they cover such vast distances. They gradually spread out from the places where they were released, expanding their territory each year.

Nina was released in the Austrian Alps in autumn 1987. By December she was spotted in Italy; by June she had reached France. Over the next few years she was spotted again in Italy, Austria and France.

Other birds have not been followed so closely. Radiotelemetry signals tend to get

lost in steep Alpine valleys and often echo around the cliffs and rock. And in vast areas of the Alps there are simply no human observers. Yet it is precisely there, in the most inaccessible Alpine regions, concealed from human view, that the vultures are most at home.

The birds feed primarily on bones, the final remains of carcasses abandoned by other scavengers. If a bone is too large to swallow they carry it aloft and drop it onto rocky slopes to splinter and crush into more manageable pieces. Until people began to persecute the "bonecrusher", this singular diet enabled the vulture to survive in the highest mountain regions.

Difficulty in tracking birds is not simply geographical. Bio-logists and volunteers also face organisational problems. Despite the investment of 20 000 Swiss francs (£9200) per bird, and a network of more than 500 dedicated vulture-watchers throughout the Alps, the bearded vulture project still consists of a haphazard assemblage of local efforts that seemingly cannot or will not monitor a bird that is oblivious to national boundaries.

What is needed, says Claude Martin, the incoming director of WWF-International, is an international monitoring programme and centralised database to track hatchings, deaths and breeding activity. This will allow conservationists to change course if necessary—deciding when, where or whether to continue releasing the captive-bred birds. □

Taiwan accuses princess of smuggling rhino horn

6111

POLICE in Taiwan have arrested a Bhutanese princess at Chiang Kai-shek International Airport in Taipei for allegedly trying to smuggle 22 Asian rhino horns into the country. Dekiy Wang-chuck has been charged with violating Taiwan's conservation laws. This is the largest ever seizure of Asian rhino horns.

According to the Taiwanese authorities, Wang-chuck admitted that she expected to sell the horn, which weighed 14 kilograms, for around \$740 000. Horn from the Asian rhino is worth ten times as much as that of the African rhino and is considered a more potent medicine.

Wang-chuck, a Cambridge graduate, comes from the tiny kingdom of Bhutan, which lies on the border between China and India. Initially, she maintained she had bought the horn in Hong Kong, but later admitted she had acquired it in Bhutan.

The seizure confirms the suspicions of

experts in wildlife trade that Bhutan might be an important route for smugglers. Its airport at Paro is well connected with the countries of Southeast Asia.

The princess carried a diplomatic passport but Bhutan and Taiwan have no diplomatic relations. The Ministry of Foreign Affairs decided that the case should be handled according to the usual criminal procedures. If convicted, Wang-chuck could receive a two-year jail sentence. Faced with the threat of US trade sanctions because of its poor record on trade in endangered species, Taiwan is trying to improve its image by taking a tough stance on smuggling.

According to TRAFFIC, the arm of the World Wide Fund for Nature that monitors trade in endangered species, the horns are from the greater Indian one-horned rhino. Most Indian rhinos live in the Manas and Kaziranga National Parks in Assam, on the border with Bhutan. The Manas park

straddles the border, but the rhinos live on the Indian side.

Conservationists are growing increasingly alarmed by the epidemic of poaching in India. They believe the Indian rhino is in as precarious a state as the black rhino in Africa, with numbers down to around 2000.

"We have had reports of 15 rhino killed in a single day on the Indian side of the border in Manas earlier this year," says Vivek Manon of TRAFFIC-India. "Three-quarters of the population of rhino there has been wiped out since 1989, leaving about 15 or so individuals."

Since 1990, Manas has been controlled by insurgents fighting for autonomy in the border regions. According to TRAFFIC, the rebels have used money from the sale of horns to buy weapons. And until recently, says Manon, poachers were killing an average of one rhino a day in the Kaziranga park. **Sanjay Kumar, New Delhi**