Bad reputation

A change of name was all it took to help turn fortunes around for a misunderstood species of vulture, once persecuted across Europe to such an extent that it ended up on the brink of extinction.

By **Katie Stacey** *Photographs* **David Pattyn**

Mistakenly believed to prey on livestock, bearded vultures are scavengers by nature – often feeding on the carcasses of animals that have fallen victim to avalanches in the Alps.

“If you look closely into a bearded vulture’s eyes, you’ll never forget it,” says José Tavares, director of the Vulture Conservation Foundation (VCF). These charismatic birds with their punk-rock hairdo, fire-red ringed eyes, and distinctive black beard are almost dragon-like in their appearance. And like dragons, these birds so nearly became creatures of myth. In the 1920s and 1930s, these majestic old-world vultures had all but disappeared from Europe. Thankfully, the only thing that has been abandoned to legend is its outdated name: lammergeier.

The name was adopted from the old German word meaning ‘lamb vulture,’ due to the belief that the bird ate live lambs. Drawings and references from the 19th and early 20th century depicted the bearded vulture taking lambs, which fuelled the negative perception and was one of the reasons for the disappearance of the bird. “Perhaps someone saw a bearded vulture carrying a lamb carcass and they thought it had killed it,” suggests Hans Frey, who runs the Richard Faust Bearded Vulture Breeding Centre. “But that’s not true. Bearded vultures fly to great heights with bones and then drop them to break them, which makes them easier to eat.”

Drawings depicted the bearded vulture taking lambs, which fuelled the negative perception.

Above: the return of the bearded vulture to European skies is largely down to a successful breeding and reintroduction project.

As a bird of prey, the case for mistaken identity can easily be understood and, to the untrained eye, it is not so very different to the golden eagle, which does take young lambs. In order to really clarify this misconception, the VCF pushed for the species’ name to be formally changed on the IUCN Red List. “From lammergeier to bearded vulture – from a negative story of persecution and extinction, to one of the best wildlife comeback stories of our time!” José enthuses.

Growing in number

In 1978, the Bearded Vulture Reintroduction Project was set up in the Alps and, in 2019, the VCF, alongside their partners, released a record number of 22 bearded vultures across France and Spain. “We are currently involved in five reintroduction and restocking projects and, whilst all of them are going very well, it is still early days for some. But the one in the Alps and the one in Andalusia have been extraordinarily successful, in the sense that new populations have been re-established,” explains José.

The Alps is the longest-running and oldest of the projects, with the first bearded vultures released there in 1986. Eleven years later, in 1997, the first pair bred in the wild. It takes bearded vultures approximately 10 years to start breeding, which makes sense, as they can live up to 30–40 years in the wild and over 50 years in captivity. Today, there are 57 breeding pairs in the Alps, which fledged a record number of 38 fledglings – nine more than in 2018.

Left: Hans Frey tends to a chick – a new addition to the gene pool. Above: a blood sample is taken to make sure chicks have a clean bill of health. Below: bearded vultures at the Richard Faust Breeding Centre. Bottom left: Hans has worked with these birds for over 30 years.

In the Alps, the population has been growing exponentially, adding five new pairs (at least) each year. Because the population in the Alps has increased so much, juvenile bearded vultures have been observed reaching some unusual places, including the first recording ever in the UK.

“We are actually winding the project down in the Alps,” says José. “We have done a number of studies, which have shown that the birds we’ve released into the Alps are now insignificant and irrelevant to the population.” The number of breeding pairs in the wild is now large enough and still increasing, and so the demographics of the birds are not dependent on the birds introduced. However, the genetic variability of the population there is smaller than what they would expect in a 100 per cent natural situation, so the VCF are still releasing two to three birds a year with specifically chosen genetics. ▶

Puppet parents

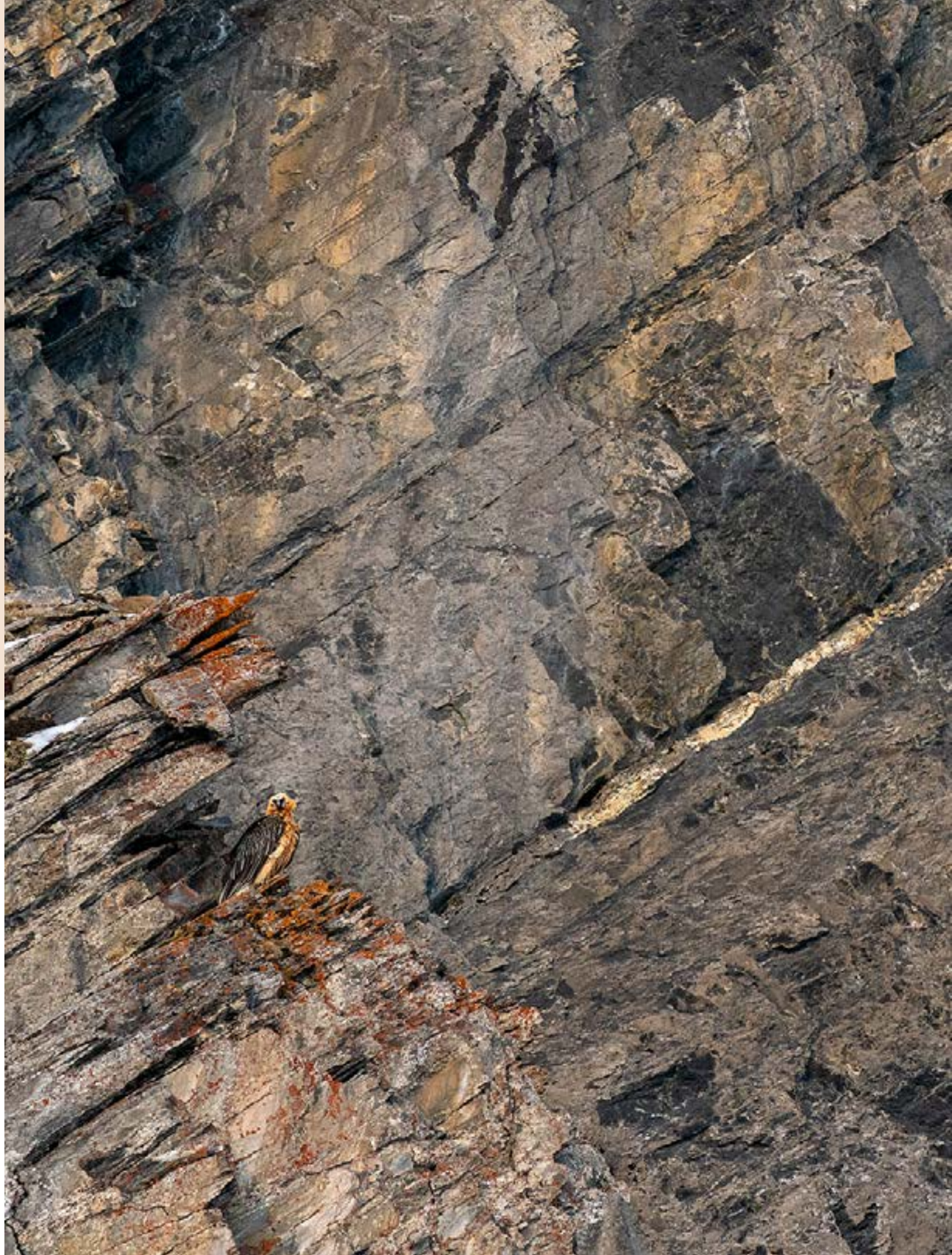
The African sub-species of the bearded vulture can be found throughout eastern Africa, from Ethiopia to South Africa, but is declining and only has significant populations in those two countries. In South Africa, the population is down to only 100 breeding pairs, and a total population of 320 birds. In 2015, a conservation programme began with the aim of creating a genetically viable captive population from 20 non-related founder birds.

The only bearded vulture in captivity they could locate was an adult female, Lesli, who they rescued from a traditional healer. And so, to achieve their aim, conservationists from the African Raptor Centre have begun to harvest second eggs from wild nests (a technique that won’t affect the wild population) and raise the chicks in captivity using bearded vulture puppets (as there are no adult conspecifics in captivity to raise them).

Raining tortoises

In 400BC, Greek playwright Aeschylus was warned by a prophecy that he would be killed by a falling object, and so he had taken to spending most of his time outside. The story goes that a large bird mistook Aeschylus's bald scalp for a rock, and dropped a tortoise on his head, killing him instantly. In south-eastern Europe, bearded vultures have been documented dropping tortoises from heights to crack open their shells and access their meat.

A Greek tragedy: the playwright that met an unusual end.



"This is normal, because the 180 captive birds at the base of the reintroduction project came from 30–40 founding birds in the beginning of the programme, which is a relatively narrow genetic pool."

To ensure that as diverse a population as possible can be created, all of the programme's birds are genetically mapped. The birds are captive bred but naturally reared. Ideally, a pair of adult captive bearded vultures will raise the chick from hatching, however, in some circumstances, the chicks will be hand-reared for the first seven days.

Bearded vultures lay two eggs but only one chick survives – a phenomenon called 'obligatory cainism'. "The first chick always kills the second chick, and so, to boost the population, we take the second egg and incubate it artificially. After six or seven days, it will then be given to an adoptive adult pair," explains José. The programme has learnt that after 10 days a bearded vulture chick tends to imprint on humans, which means that when they are then released they will very often approach humans. Therefore, if the birds are to form wild populations on release, it is critically important that they are raised in as natural a method as possible.

An adult bearded vulture can survive on a diet of 80 per cent bones (thanks to its unique stomach acid).

Top left: the species dwells in mountainous areas. Right: the bird's feathers pick up iron oxide deposits, which help it to blend into the cliffs.

The process begins in autumn, when the adult pairs come into breeding mode. The eggs are then laid around Christmas and hatch at the end of February to mid March. Bearded vultures are one of the earliest breeding birds in Europe because, though an adult bearded vulture can survive on a diet of 80 per cent bones (thanks to its unique stomach acid, which has a pH of about one), young bearded vultures in the nest need meat. Therefore, the species has evolved to time hatching with the end of the coldest temperatures, and snowiest season (the period when the most avalanches occur), so that when the snow starts to melt at the beginning of spring, animals that were killed by the avalanches are revealed, offering up plentiful meat. Consequently, the captive-bred birds are released at around the same time, approximately two weeks before fledging.

Moving out

Releasing the captive-bred juveniles into their new homes is quite a logistical operation. The five bearded vulture breeding centres, and the zoos the VCF collaborate with, are spread across Europe, so the birds often have to cross country borders to get to their new homes. "We transport them by car, sometimes by plane, all within one day, to their reintroduction site," explains José. Up the mountain, the VCF work with local partners and NGOs to get them settled into

Left: also home to chamois, Italy's Gran Paradiso National Park now has at least two pairs of bearded vulture.

Setting a precedent

The success of the bearded vulture project has resulted in the creation of the Multi-species Action Plan to Conserve African-Eurasian Vultures, which covers 15 species of old-world vultures. Created after a long process of workshops, and consultations with governments and NGOs from over 100 countries, it has been adopted by the Convention on Migratory Species (CMS). It lists the priority actions for – and has become the global blueprint for – vulture conservation. Visit **cms.int**

The griffon vulture is just one species the action plan aims to conserve.

"We have lost birds to poisoning, collision, electrocution, and being shot by hunters."

Above: soaring over xxxxxxx. Right: bearded vultures primarily feed on carcasses, including those of alpine ibex. Bottom right: winter in the Alps.

their natal area. They are transferred on foot, which can involve two or three hours hiking with the bird in a transport box on someone's back. The bearded vulture is then put immediately in a cave that has been prepared for them and they are left there – a technique known as 'hacking'.

They are fed via a system where food is dropped from above, so that they don't have contact with humans, and then they are left to fledge naturally. The juveniles are fed for about a month in the cavity, on a mixture of pieces of meat but also, little by little, bones – small legs of goats, parts of rabbits – for them to get used to the diet. Then, gradually, the amount of food is reduced. They subsequently fledge and start finding food for themselves. This process is monitored very closely, people follow the activity of the birds from a distance throughout, and the vultures are fitted with GPS tags.

"The bearded vulture has been very positively received by all stakeholders in the Alps. Not only are they beautiful, they are also relatively neutral, because they don't kill anything," says José. This project has proven a conduit for advancing biodiversity conservation in the wider Alps, due to the VCF's wide-reaching collaborative efforts, which include working with hunters and livestock breeders. José recently received a letter from the children of the livestock breeders of Vercors, a region in the French pre-Alps, asking if they too could have bearded vultures in their little Massif. They even offered to do the fundraising to make it happen. "This is wonderful, because these stakeholders are absolutely essential for the long-term conservation of this and other species. If, for example, you go the Alps and you talk about the wolf or eagles, half of the room leaves because it is such a controversial topic. The bearded vulture conservation project is not only restoring a species, which is very important for the alpine ecosystem, it is also helping advance wider conservation issues in a positive way."

Ongoing threats

There is, however, still work to be done. In the Parc Naturel Régional des Grands Causses, one of the sites that is part of the EU-funded LIFE Gypconnect project (connecting the reintroduced population of the Alps with the only remaining wild population in continental Europe, in the Pyrenees) the mortality rate has been higher than expected. "We have lost birds to poisoning, collision, electrocution and being shot by hunters," says José. As they have always done so well, the VCF and its partners are actively working with local stakeholders to mitigate these threats. "It looks like wildlife poisoning is on the increase in that area, probably due to the wolf's comeback. We have a proposal with the EU to work towards tackling this specific issue. Our partners are also working with French electricity companies to correct, insulate and in some cases bury some of the lines."

What is so impressive about the programme is that it is always expanding its prospects, with José freshly returned from a recce to Morocco. The population there was previously connected to the Spanish ones but is now isolated, having suffered immensely from poisoning – the main threat to vultures worldwide – they now survive solely in the highest parts of the Atlas Mountains. "It all started with one project in the Alps, which expanded into several reintroduction projects," José says. "We approach bearded vulture conservation at a regional scale and, for us, Morocco or the Balkans are the next geographical step." It may be the most successful conservation story of our time, but they have no intentions of slowing down the momentum.

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FIND OUT MORE Learn more about the species and the work of the Vulture Conservation Foundation at **4vultures.org**