

# ‘You sometimes feel like Noah’: the London zoo team bidding to save doomed species

The birth of a Socorro dove, extinct in the wild, has boosted conservationists’ hopes of rewilding captive species

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- DNA testing of the new Socorro dove hatchling at London Zoo will determine its sex. Photograph: Charlotte Bleijenberg/Getty Images/iStockphoto

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ews that a Socorro dove in London Zoo had produced a hatchling two weeks ago provoked joyous celebrations among conservationists. *Zenaida graysoni* is

extinct in the wild, its captive population having been reduced to a single breeding pair in the last century.

Numbers have been rising slowly and the birth of a new chick raises hopes that the doves, which once thrived on Socorro island, 600km (373 miles) off the west coast of Mexico, before being eradicated, could be restored to their former homeland.

“We await results of a DNA test of its feathers. That will tell us its sex,” said Gary Ward, curator of birds at the Zoological Society of London (ZSL).



Gary Ward, bird curator at ZSL. Photograph: London Zoo

“If it is male, that is fine. But if it turns out to be female, she will instantly become the most important bird in London Zoo – for she will then be able to play a key role in restoring Socorro dove numbers.”

The project is part of a campaign which aims to perfect techniques needed to rewild many other animals, insects, fish and birds which today survive only as captive occupants of zoos or wildlife collections.

In addition, scientists say numbers of these populations are destined to rise as climate change and habitat destruction leave more and more species **extinct in the wild**.

“One day we will be faced with the task of returning these species to the wild – and we need to start preparing for that now,” said John Ewen, of the ZSL’s Institute of Zoology. “We need to learn how best to **rewild populations**.”

As part of this programme, scientists at Whipsnade, ZSL’s other main zoo, are collaborating with other zoos on two key projects. The first will involve the Socorro dove. The second will focus on three different species of pupfish. These tiny freshwater fish were once endemic to Mexico until the springs in which they lived were destroyed by climate change and farmland expansion.

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Housed in tanks in Whipsnade’s main aquarium, La Palma pupfish, Charco Palma pupfish and Potosi pupfish are being tended by zoo staff – along with several dozen other endangered or extinct-in-the-wild species – prior to their release. “We will either ship them out as adult fish or send them to Mexico as eggs,” said ZSL fish expert Alex Cliffe.

“We are still working out which method to choose. We are going to be laser-focused on getting this right. The lessons we will learn will be crucial in rewilding other fish species.”



Potosi pupfish housed at Whipsnade aquarium will be released in their native Mexico. Photograph: Whipsnade Zoo

To date, only a relatively small number of species have been successfully returned to their natural habitats after becoming extinct in wild.

“The Arabian oryx, the Przewalski’s horse and the Guam rail are good examples,” said Ewen. “Crucially, conservationists have learned a lot from these projects.”

One critical lesson has been the need to pinpoint exact causes of a species eradication in the wild so that this threat can be removed and an animal returned to its native habitat in safety. In the case of Socorro, ensuring that feral cats have been eradicated from the island will be vital, says the Whipsnade team.

However, it is not always possible to remove a particular threat. The brown tree snake which was accidentally transported to the Pacific island of Guam was responsible for killing off its native flightless bird, the Guam rail. The snake is now established on the island and would simply kill off reintroduced birds. So a new population of Guam rail, bred from captive birds, has been established instead on nearby, snake-free Rota and Cocos islands.

“The crucial point is that you have to prepare for all sorts of contingencies when it comes to reintroductions,” added Ewen.

“It is very easy to wipe out a species – but it is very, very difficult to return it to the wild.”



The Arabian oryx is a good example of a species that was rewilded after becoming extinct. Photograph: Nigel Cattlin/Alamy

This point was backed by Ward. “We face an inevitable tidal wave of species being lost in the wild,” he commented. “You sometimes feel like Noah and his ark. Which animals can you throw on the ark before the wave comes?”

The problem is worsened by the fact that most extinct-in-the-wild species are held in only a handful of institutions.

“That is a very precarious state to be in. An accident or disease outbreak at one could have devastating consequences,” added Cliffe.

“We need massive investment to ramp up the care we provide for these populations so they can be in a place where we can keep them safe and harvest them for release.”

The uncertainties that face conservationists is demonstrated by the Socorro. It was first bred at London Zoo in 2006. The bird was named Arnie, after Arnold Schwarzenegger, with reference to his “I’ll be back” line in the film *Terminator*. Only later was it discovered that Arnie was a female.

Conservationists will be hoping for a similar designation for London’s latest Socorro, added Ward.

“There are 156 Socorro doves alive in collections across the world today,” he said, “and only about 30 are females of breeding age. So another young female would be a tremendous boost for the continuing viability of the world’s population of Socorro and their return to the wilds of their native land.”