Genetically unique Lake Oku clawed frog bred in ZSL's Amphibian exhibit

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A Critically Endangered and evolutionarily distinct species of frog has been bred in a UK zoo for the first time ever.

The Zoological Society of London's (ZSL) team of amphibian keepers at ZSL London Zoo are the first in the world to have successfully bred Lake Oku clawed frogs (*Xenopus longipes*), marking a momentous step in ensuring the future survival of the species.

Classed as Critically Endangered on the IUCN Red List, Lake Oku frogs are ranked as number 35 on ZSL's EDGE List (Evolutionarily Distinct and Globally Endangered) due to their perilous conservation status and unique evolutionary history.

Native only to Lake Oku, a single high altitude freshwater lake in Western Cameroon, Africa, the small, totally aquatic frogs are some of the most genetically unusual creatures in the world, having developed extra chromosomes throughout their evolution.

Four of ZSL London Zoo's thirteen tadpoles have already metamorphosed into juvenile frogs, and ZSL's team of zookeepers have been working tirelessly to ensure the precise conditions are maintained for the precious amphibians.

New behavioural observations of the Lake Oku clawed frogs, made for the first time by zookeepers at ZSL London Zoo, revealed crucial insights not only into the requirements of the adult frogs but also their tadpoles, which prior to breeding at ZSL had never been seen in Zoos or the wild before.

Ben Tapley, head of the reptile and amphibian team at ZSL London Zoo said: "We are absolutely delighted to be the first Zoo in the world to have successfully bred the Lake Oku clawed frog.

"These Critically Endangered amphibians represent a unique branch of the evolutionary tree of life. Due to their restriction in the wild to just a single and relatively small site, they're incredibly vulnerable to threats of invasive species or disease, which would be catastrophic if introduced to Lake Oku.

"We worked closely with field biologists to obtain very precise environmental data from Lake Oku which we replicated in our facilities here at ZSL London Zoo.

"We will now be able to share our insights gleaned from naturally breeding these frogs with conservation biologists working with the species in Cameroon and zoos around the world to help ensure a sustainable population can be maintained.

"It's a phenomenal achievement for the survival of this species."

The Lake Oku clawed frogs can be seen at the amphibian and reptile house at ZSL London Zoo – find out more at www.zsl.org.

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Editors' Notes

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Zoological Society of London (ZSL)

Founded in 1826, the Zoological Society of London (ZSL) is an international scientific, conservation and educational charity whose mission is to promote and achieve the worldwide conservation of animals and their habitats. Our mission is realised through our ground-breaking science, our active conservation projects in more than 70 countries and our two Zoos, ZSL London Zoo and ZSL Whipsnade Zoo. For more information visit www.zsl.org

ZSL EDGE Programme

Using a scientific framework to identify the world's most Evolutionarily Distinct and Globally Endangered (EDGE) species, the EDGE of Existence programme highlights and protects some of the weirdest and most wonderful species on the planet. EDGE species have few close relatives on the tree of life and are often extremely unusual in the way they look, live and behave, as well as in their genetic make-up. They represent a unique and irreplaceable part of the world's natural heritage, yet an alarming proportion is currently sliding silently towards extinction unnoticed.

http://www.zsl.org/conservation-initiatives/animals-on-the-edge

Lake Oku clawed frog (*Xenopus longipes)*

·**Genetics**

The African clawed frogs have undergone drastic changes in chromosome number during their evolution, making them some of the most genetically unusual creatures in the world. They exhibit polyploidy, meaning they have more than the two sets of chromosomes found in most other organisms, known as diploid. The Lake Oku clawed frog has 12 sets of chromosomes, so is dodecaploid. This is a very high number even in plants, and is unique in animals (with the exception of its close relative, the Uganda clawed frog, (*Xenopus ruwenzoriensis*).

·**Lake Oku Frog Habitat**

Their only known habitat is Lake Oku in Western Cameroon, a high altitude freshwater lake completely surrounded by mountain rainforest found 2,219 metres above sea level on Mount Oku, the second highest peak in mainland West Africa. Local people respect this lake as a sacred place and no fish have been introduced. Invasive predators such as fish or disease could prove catastrophic to the clawed frog population.

·**Anatomy and behaviour**

The Lake Oku clawed frog is a small species, with a total length of 28-31 mm in males and 32-36 mm in females. The body is pear-shaped with long, slender limbs. The feet are particularly well-developed and possess long, thin, webbed toes. They are quite inept on land, since their bodies are entirely adapted for life in the water. African clawed frogs do not have tongues at all and rely on their hands to assist them in making a capture of prey. They sit motionless in the water with their arms and fingers outstretched, waiting to detect motions in the water caused by another animal swimming close by.

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