



# DONOR IMPACT REPORT

BOVA UK

Presented by Nature's SAFE  
June 2025



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OVERVIEW

# About Nature's SAFE

# Over 43,500 animal species are at risk of extinction.

From fossil records, the baseline extinction rate is estimated to be around one in every one million species per year. Since pre-human times, this has increased to at least 100 -1000 times higher.

Preventing further extinction will require the combination of habitat protection and restoration, preventing further exploitation of wildlife, controlling invasive species, mitigating the effects of climate change, protecting the health of global wildlife populations, and maintaining genetic diversity in animal populations.

We are saving animals from extinction by preserving genetic material within living cells. To do this, we work with leading zoos and wildlife parks to collect biological samples from threatened species.

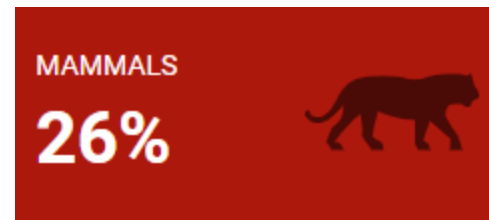


# Biodiversity Loss

■ We are in the 6th mass extinction – the largest predicted loss of biodiversity for 65 million years

■ **Up to 1 million species are at risk of extinction**

■ According to the International Union for the Conservation of Nature;  
40% of amphibian  
26% of mammalian  
14% of avian species  
are threatened with extinction.





**UPDATE**

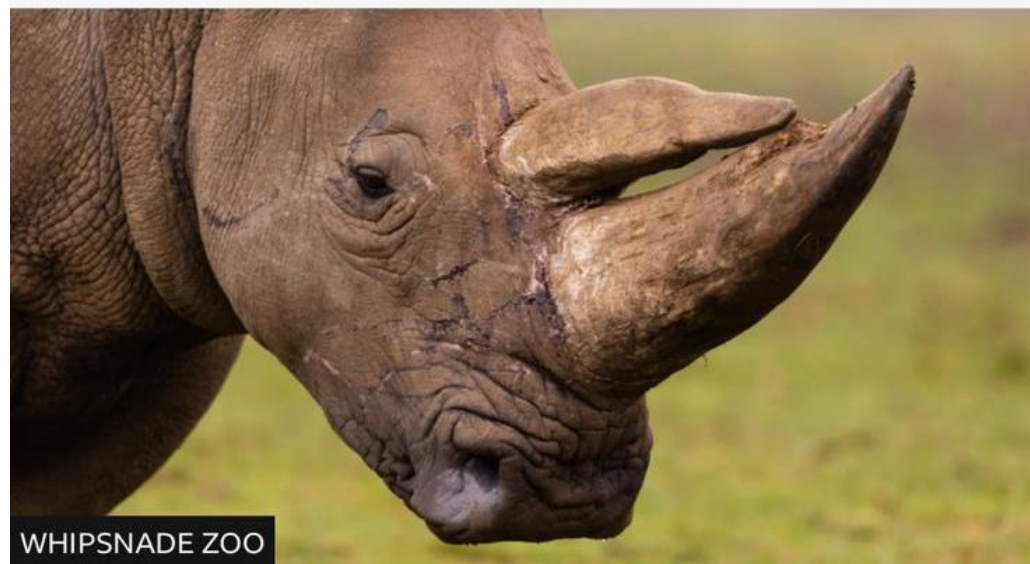
# **Success stories**



**NATURE'S SAFE**  
SAVING ANIMALS FROM EXTINCTION

Charity No 1192876

## Cells from dead rhino could bring new life



WHIPSNADE ZOO

Living cells have been created from a tissue sample taken from a recently deceased rhino in 2021

**Eleanor Lawson**  
BBC News, West Midlands

29 May 2025

**A skin sample from a rhino could bring the promise of new life thanks to the work of a wildlife charity, four years after the rhino's death.**

The 40-year-old southern white rhino from

# A LIVING LEGACY

In October 2021, veterinarians at Whipsnade Zoo teamed up with three specialist groups to collect tissue samples post-mortem from a recently deceased 40-year old Southern white rhino, with the hopes that they could be preserved and used in the future to help study her genetics and potentially create new life.

Nature's SAFE cryopreserved a skin sample with the cells in a living state, from the rhino's ear at  $-196^{\circ}\text{C}$ , so that when thawed out in the future they could be revived and cultured to create fresh cell lines.

**In April 2025, nearly 4 years after the rhino's death, the team at Nature's SAFE successfully cultured these cells and have grown new cell lines. This not only proves these tissues are still alive, but it also provides indefinite opportunities for creating new life in the future.**

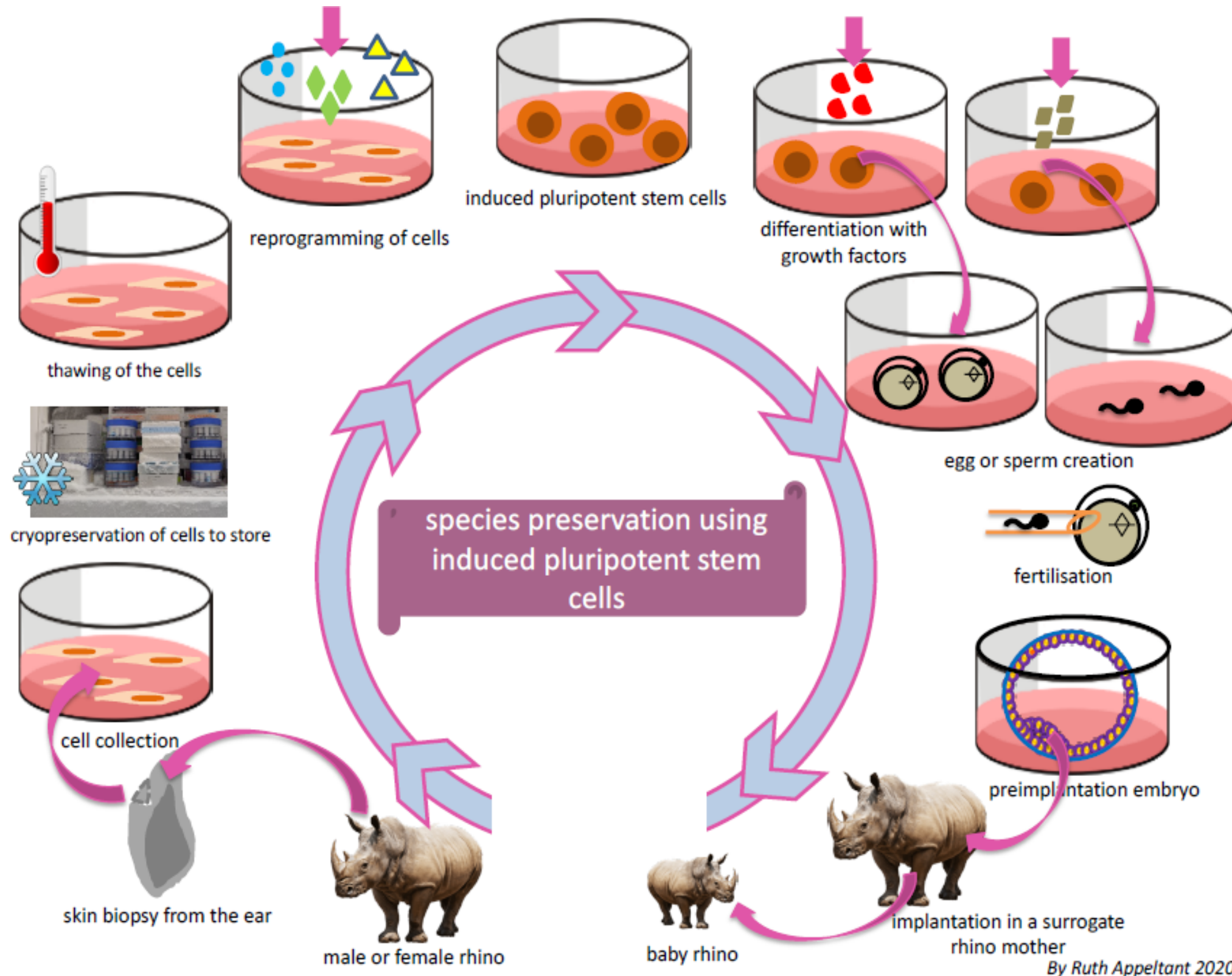
**Nature's SAFE has successfully cultured cells from an additional 9 species.**



**NATURE'S SAFE**  
SAVING ANIMALS FROM EXTINCTION

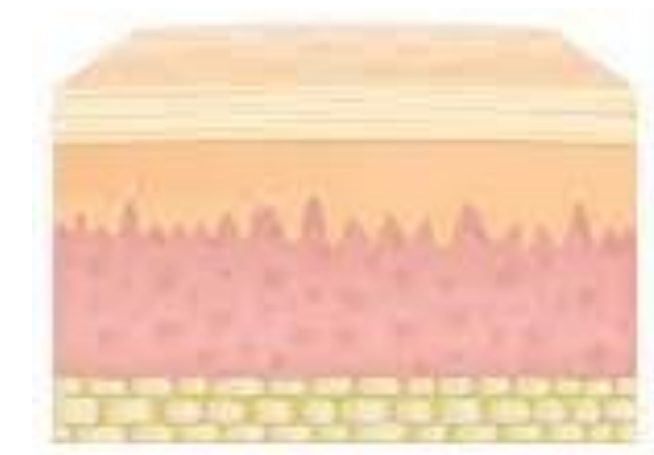
Charity No 1192876

# Utilisation of Skin Samples - iPSCs



By Ruth Appeltant 2020

Skin



Egg Cells



Sperm Cells

# BREAKTHROUGH IN CORAL CONSERVATION

Wednesday, November 27th 2024 marked a groundbreaking moment for coral conservation. **For the first time ever in Europe, Nature's SAFE successfully fertilised coral eggs using frozen (and subsequently thawed) coral sperm.**

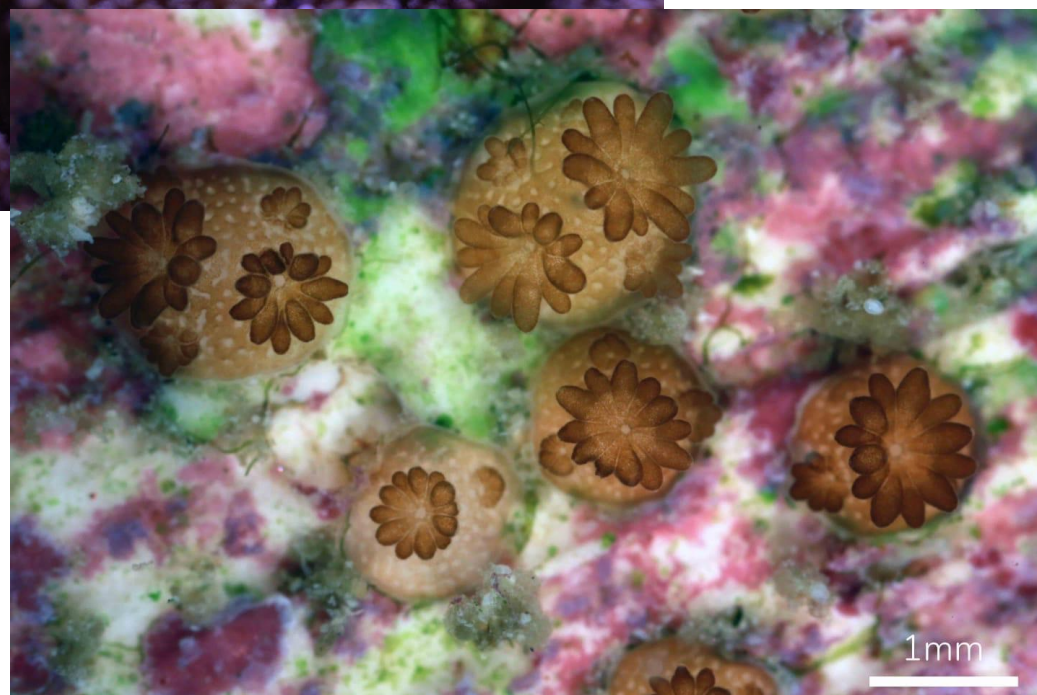
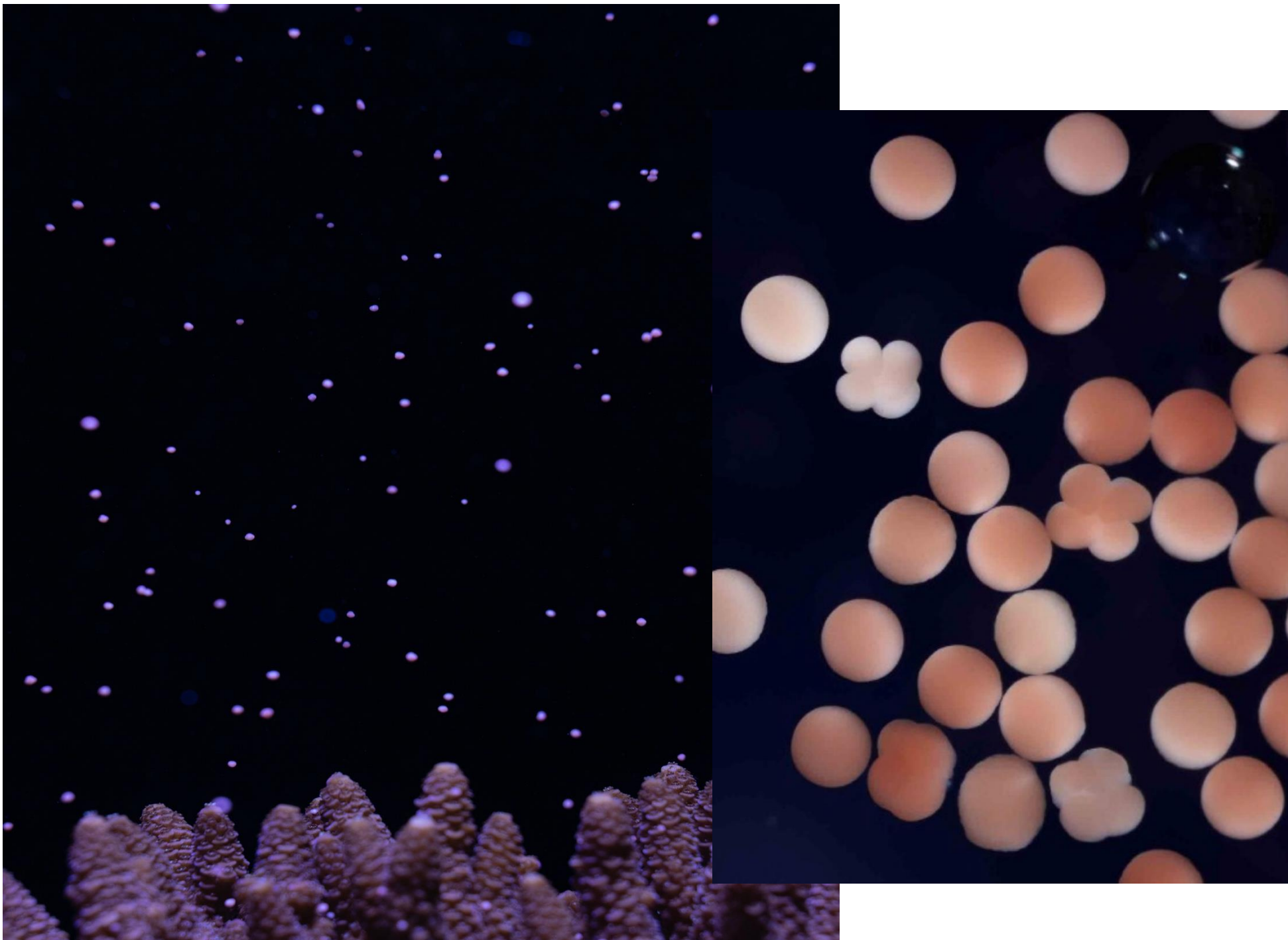
This advancement was the result of our partnership with the Horniman Museum and Gardens, and demonstrates the powerful potential of cryopreservation to support global reef restoration efforts.

Nature's SAFE is part of the CryoCorals Network – a specialist group of experts working to save the world's coral.



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# HOPE FOR CLOUDED LEOPARD

Nature's SAFE has collaborated with leading reproductive vets who have successfully retrieved viable semen from a Clouded Leopard, which has then been cryopreserved by Nature's SAFE. This has been conducted with the intention of using it for Artificial Insemination to support population health.

Clouded Leopards are listed as Vulnerable on the IUCN Red List, and with an ageing population within captivity in the UK, having sufficient numbers to potentially support wild populations is increasingly challenging.

They are incredibly difficult to breed due to the need to partner before the age of 2 years in order to minimise the risk of aggression when introduced.

AI and other Artificial Reproductive Techniques provide unique opportunities to support a shrinking population whilst eliminating the risk of harm to an animal. It is also easier to ship semen across borders than it is wild animals, so new genetics can be introduced to bolster populations and make reintroduction efforts a real possibility.

If AI techniques are successful, this would be a world first.



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# YOUR IMPACT

Through your donation, in addition to the ongoing projects, you have supported the preservation of:

**5624**

SKIN SAMPLE  
VIALS

**1238**

SEMEN STRAWS

FROM

**313**

SPECIES



UPDATE

# Research projects

# Project 1 Cryopreservation for UK Native Species, White-clawed Crayfish

Nature's SAFE is the cryoconservation partner for a large national effort with multiple partners to save the Native White-clawed crayfish from extinction. Numbers are declining rapidly due to an American invasive species, and the Crayfish Plague. We are working with partners at UCL to develop groundbreaking egg cryopreservation technology .



# Project 2 Amphibian Cell Culture

41% of amphibian species are threatened with extinction and amphibian cell culture has been a global challenge. Nature's SAFE has partnered with the University of Chester in a multi year project to develop amphibian cell culture techniques. Samples are being donated from least concern species from conservation partners for the purpose of advancing research in this space.



# Project 3 Cryopreservation of British Swallowtail Butterfly

Nature's SAFE has partnered with ARU and Jimmy's Farm to support two PhD studies into the cryopreservation of butterfly larvae, with the intention of preserving and releasing British Swallowtails – our largest and rarest butterfly in the UK.



# Project 4 Seahorse Cryopreservation Research

Nature's SAFE is partnered with the largest aquarium group in the world, and are committed to advancing cryopreservation across all marine species. One focus project is seahorses, as these are a taxa that has never been cryopreserved before.





**UPDATE**

# Ongoing projects

# Preserving UK Native Species

Nature's SAFE is working with partners around the UK to preserve our UK Native Species. As part of this work, the team are constantly checking and updating protocols and confirming 'proof of concept'. As well as Rhino cell lines, we have successfully grown cell lines from the Red Squirrel and the Hedgehog is next on the list! We are the cryoconservation partner for Harvest Mouse Restoration and work with Wetlands centres to support cryopreservation of our native avian species.



# Preserving 50 Genetically distinct samples for European Hedgehog

Nature's SAFE is working with partners around the UK to preserve a minimum of 50 genetically distinct samples from our beloved hedgehog. This is the minimum number required to support a viable population.





# GLOBAL GENETIC RESCUE

The charity is partnering with in-country organisations to provide knowledge transfer and equipment to ensure the sovereignty of genetics remains in country of origination.

We are currently talking to partners across 4 continents for the development of biobanking hubs.

# Media Coverage



# The Observer

france.tv



tve

# The Telegraph





To discuss your partnership, please contact us:



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'...The best time to save a species was yesterday. The next best time is right now...'



**Thank you for being an essential part of this journey**

We couldn't save our planet's wildlife without you.

