# The Era of Making Science Work for Conservation

## 1996

**D**r. Terri Roth becomes the new Director of CREW and the name is changed to Center for Research of Endangered Wildlife to reflect the broader scope of the program.

## 1997

**D**r. William Swanson joins CREW as Head of Animal Conservation, expanding CREW's global influence with conservation and training programs in Brazil and Mexico.

**C**REW's Post-doctoral training program commences with the goal to produce future leaders of conservation research programs worldwide.

**C**REW research facilitates the first successful mating of captive Sumatran rhinos in over 100 years.

## 1998

**R**esearch with amphibians initiated to help address their global extinction crisis.

## 2000

**A**n ocelot kitten is born after embryo transfer, the first endangered cat produced from frozen-thawed embryos.

**C**onservation research begins with African violets (a group of species that are endangered in the wild), expanding the Plant Division's international collaborations to Africa.

## 2001

**P**lant Division achieves the successful propagation of its 20th rare species - Cumberland sandwort, a federally-listed endangered species.

**P**regnancy is sustained in a Sumatran rhino, with the calf expected by the end of 2001 – the first produced in captivity since 1889.

**T**he Cincinnati Zoo and Botanical Garden's conservation and research efforts become formally organized under the umbrella of CREW – The Center for Conservation and Research of Endangered Wildlife.


Center for Conservation and
Research of Endangered Wildlife

Cincinnati Zoo and
Botanical Garden

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# CREW Milestones

Center for Conservation and
Research of Endangered Wildlife

Cincinnati Zoo and Botanical Garden

# The Era of Technology Development

## 1981

The Cincinnati Zoo establishes one of very few research programs based at a zoological institution, the Cincinnati Wildlife Research Federation, under the direction of Dr. Betsy Dresser.

## 1982

"Frozen Zoo" is created to store sperm and embryos from endangered animals.

## 1984

Antelope embryo transfer results in several "world's firsts". Both intraspecies (eland embryo into eland surrogate) and interspecies (bongo embryo into eland surrogate) embryo transfers produce calves.

## 1986

Kittens produced from frozen-thawed domestic cat embryos demonstrate the feasibility of using cryopreservation to help conserve endangered cats.

Dr. Valerie Pence establishes the Plant Conservation Division, one of the first plant conservation research programs at a zoo or botanical garden.


## 1988

Plant Division initiates the Endangered Species Propagation Program by working with rare Trillium species.

Ohio Seed Bank Project is founded, one of the first systematic attempts to bank seeds of rare species and to use cryopreservation as a method for seed storage - the "Frozen Garden" begins.

The research program's name is changed to Center for Reproduction of Endangered Wildlife (CREW).


## 1989

In vitro fertilization and interspecies embryo transfer results in the birth of an Indian desert cat kitten to a domestic cat mother.

Cryopreservation is successfully applied for the first time to species of walnuts, chestnuts and oaks, species with large, short-lived seeds.

Cacao embryos survive cryopreservation for the first time. This important economic crop is a model for endangered tropical species with very short-lived seeds.

## 1991

The Carl H. Lindner, Jr. Family Center for Reproduction of Endangered Wildlife is completed, providing a new home for CREW and becoming the first facility of its kind dedicated to both animal and plant conservation.

CREW Volunteer program expands to provide much needed support and interpreters for the new facility.

## 1992

CREW hosts an International Cryopreservation Workshop that stimulates worldwide interest in establishing frozen zoos and gardens for endangered animals and plants.

Gametophytes of nonseed plants (ferns and bryophytes) survive cryopreservation and prove the value of this technology for greatly enhancing tissue preservation.

## 1993

Plant Conservation Division initiates Student Co-op Program, offering an opportunity for college biology students to gain experience in plant conservation research.

## 1994

Plant Division takes in vitro collecting to the tropics of Trinidad, launching its international field conservation efforts.

## 1995

"Test-tube" gorilla born as a result of in vitro fertilization and embryo transfer, demonstrating that reproductive technologies developed for humans can be used to help propagate endangered great apes.

Domestic cat kittens produced from embryos fertilized by sperm injection, a potentially useful technique for propagating rare felids that produce poor quality sperm.