



Ukutula Conservation Center & Biobank

Conservation through Research and Education

The Farm Klipkop, 411 JQ District Brits,
North West, South Africa
Landline: +27 (0) 12 254 4780
Mobile: +27 (0) 78 863 5089
Email: info@ucc-biobank.org

ucc-biobank.org

MEDIA RELEASE

31 August 2018

First Ever Lion Cubs Born Through Artificial Insemination Worldwide

A lioness at the Ukutula Conservation Center (UCC) and Biobank, in the North West Province, South Africa, has given birth to two cubs conceived via non-surgical artificial insemination (AI), using fresh semen collected from an adult male lion at the same facility. These are the first ever lion cubs to be born by means of artificial insemination – a world first achievement.

Mr Willi Jacobs, owner of Ukutula and founder of the UCC & Biobank, and Dr Isabel Callealta, proudly confirmed the birth of the cubs on Saturday, 25th August 2018. The artificial insemination was done by Dr Isabel Callealta, a qualified veterinarian from Spain and PhD candidate at the University of Pretoria (UP), under the supervision of Dr Imke Lüeders and Prof André Ganswind.

This achievement is part of a research study by a team of scientists from the UP on the reproductive physiology of the female African lion (*Panthera leo*), and the development of artificial insemination protocols for this species, which could be used as a baseline for other endangered large wild felids.

Although African lions normally breed quite well in captivity, the wild population is highly fragmented and suffers progressively from geographic isolation and inbreeding. Indiscriminate killing and prosecution, habitat loss and prey depletion, epidemic diseases, poaching, and trophy hunting threaten the extinction of these existing wild populations. In fact, lion populations throughout much of Africa are accelerating towards extinction more rapidly than previously thought. The African lion population is estimated to have decreased from 1,2 million individuals in 1800 to about 25 000 in 2016, and an estimated 18 000 in 2018. This is a decrease of more than 98% over 220 years, with a decline in numbers of more than 60% just over the last 25 years. Ominously, the natural habitat range of lions in Africa has decreased by more than 97% over the last few decades.

The African lion is listed as Vulnerable on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, with the West African lion subpopulation considered critically endangered, while the Asiatic lion (*Panthera leo persica*) is also considered endangered in the wild and breeding success in captivity, especially zoos, is very limited.

The IUCN has recommended that captive (*ex situ*) breeding programs for wildlife should be established before the wild (*in situ*) population becomes so unstable that any interference will further accelerate the decline. Presently, this situation has become a precarious global challenge and a specific reality in the case of lion and cheetah populations.

Since inception in 2006, Ukutula, as a registered wildlife breeding facility, applied aforementioned IUCN's One-Plan-Approach (OPA) to species conservation and animal breeding principals whereby animal breeding is considered an essential part in conservation management as stipulated in terms of the Convention of Biodiversity held in 1994.

In the pursuit of conservation of vulnerable and endangered species, Ukutula has hosted more than 15 different research teams since 2006, including more than 55 different researchers, scientists and post-graduate students from various national and international universities and research organisations.

The important results obtained from the reproductive lion research at Ukutula, accentuates the value of the African lion as an accessible and valuable model species for the study of the reproductive biology of large, non-domestic felids, and the applicability of assisted reproduction techniques (ARTs) within their applicable conservation strategies.

According to Dr Callealta, the team now has novel data for the African lion's reproduction physiology. "This, together with the success of the AI births of the lion cubs, not only celebrate a world first achievement, but has laid the foundation for effective non-surgical AI protocols for this species, using both fresh and frozen-thawed sperm."

The application of these new techniques could provide a faster and broader diversification and distribution of the genetics, and a reduction of disease transmission, as well as, of course, independence from animal's translocation for breeding purposes.

Mr Willi Jacobs stated that Ukutula is honoured to have been able to provide an advanced scientific facility as well as the required animals for this exciting research project. "We are grateful to the team of scientists who continue working relentlessly in pursuit of this key element in preserving future generations. There can be little doubt that wildlife conservation through education and ethical scientific research is the most suitable, long-term solution for our planet's conservation challenges and dwindling wildlife populations."

Contact Detail:

UCC & BIOBANK
PostNet Suite # 272, Private Bag X5091,
Brits 0250, North West, South Africa
Landline: +27 (0) 12 254 4780
Mobile: +27 (0) 84 510 1046
Fax: +27 (0) 86 617 6753
Email: info@ucc-biobank.org
Web: ucc-biobank.org