



cheetah.org

CCF is an international non-profit incorporated association dedicated to the long-term survival of the cheetah and its ecosystems.

RESEARCH

CONSERVATION

EDUCATION



The Cheetah Conservation Fund (CCF) conducts research on the biology, ecology, and genetics of cheetahs worldwide. Their research forms the foundation for CCF's education and conservation initiatives. Notably, CCF is the first predator research program operating outside a protected area and collaborating with local communities where cheetahs reside. Dr. Laurie Marker is the Founder and Executive Director of CCF with research programs directed by Dr. Anne Schmidt-Küntzel and Dr. Bogdan Cristescu.

Research

GENETICS, HEALTH AND REPRODUCTION

CCF conducts ongoing biomedical research by collecting and analyzing various samples from cheetahs across their range, including blood, skin, tissue, sperm, and fecal samples. So far, they have sampled thousands of cheetahs to gain insights into their overall health, disease, stress, hormones, and reproductive health in the wild population.

Sampled cheetahs undergo comprehensive examinations under anesthesia, which involve measurements and weight assessments for morphometric studies. Dental structure and reproductive fitness are also analyzed during these exams. These examinations contribute to assessing the overall health of the world's cheetah population.

BEHAVIOR DEMOGRAPHICS, HOME RANGE AND REINTRODUCTION

CCF researchers study cheetah movement to understand home ranges, habitat preferences, territorial behavior, and other critical survival-related behaviors. Over 25 years, they have tagged and released hundreds of cheetahs back into the wild and equipped several hundred more with VHF and satellite radio-tracking collars. Working alongside CCF conservationists, researchers assess relocation, reintroduction, and non-invasive monitoring techniques to bolster sustainable wild cheetah populations.

LIFE TECHNOLOGIES CONSERVATION GENETICS LABORATORY

To enhance wild cheetah population monitoring, CCF established the Life Technologies Conservation Genetics Laboratory, the sole fully capable facility of its kind at an in-situ conservation site in Africa. This state-of-the-art lab produces, analyzes, and provides results in-house, focusing on cheetah gene flow, genetic variation patterns, and behavioral ecology in specific habitats. Researchers from various organizations can access the lab, benefiting not only cheetahs but numerous other species and contributing to training conservation geneticists across Africa. CCF's efforts extend to the Horn of Africa, where they have extracted and genotyped samples from all confiscated cheetahs to determine their origin. This research could result in the uplisting of this subspecies to Critically Endangered, reinforcing the importance of their publication.

GENOME RESOURCE BANK

CCF has taken significant steps to ensure species survival through the preservation of biological samples. Sperm, tissue, and blood samples are cryopreserved and stored in the Genome Resource Bank (GRB), which has been operational since 1991. This bank is one of the most extensive repositories for an endangered species, with semen from hundreds of wild-caught male cheetahs preserved using best practices. CCF continues to collaborate with the Smithsonian Institution to improve cryopreservation methods.

In 2007, CCF achieved a groundbreaking milestone by collaborating with researchers from the Smithsonian's National Zoo and the University of California at Davis to produce the first in vitro cheetah embryos developed to the blastocyst stage. Their leadership in reproductive science resulted in the birth of the first artificially inseminated (AI) cheetah cub, using frozen sperm from Namibia, and the first cubs born through in vitro fertilization (IVF) in the USA.

Furthermore, CCF has initiated a sperm bank for the UAE and conducted multiple workshops on collecting and effectively freezing sperm from adult male cheetahs to preserve the genetic diversity of the source populations. These efforts contribute significantly to the conservation and survival of cheetahs.

ECOLOGICAL RESEARCH

CCF conducts comprehensive evaluations of cheetah habitat and prey availability while monitoring carnivores within the cheetah's ecosystem. This involves assessing vegetation and growth patterns, designating land for ecological management, and studying the impact of bush encroachment on biodiversity. Through long-term studies, CCF monitors how wildlife species utilize habitats and investigates hunting practices and prey preferences specific to different cheetah populations. They also collect data on predation and develop methodologies for reintroducing prey species in countries with cheetah populations. These efforts enhance our understanding of the cheetah's ecological dynamics and support conservation initiatives in cheetah range areas.

CHEETAH CENSUS RESEARCH

Cheetahs are challenging to count using conventional census techniques because of their secretive behavior. CCF researchers have explored different census and monitoring methods, such as radio telemetry, spoor (track) counts, camera traps, and scat detection dogs. They employ known density estimates to calibrate population estimates, which helps identify areas of potential human-carnivore conflict. By presenting this data, CCF persuades key stakeholders to implement appropriate conservation measures to mitigate the impact on cheetah populations.

SCAT DETECTION DOGS

CCF has been a pioneer in using scat detection dogs in Namibia for cheetah census, genetic relatedness, and demographic research. Their ecologists employ specially trained dogs with an exceptional sense of smell to locate cheetah scat, which is colloquially known as "black gold." Collected samples are then processed in CCF's genetics laboratory, where DNA is extracted to identify individual cheetahs and understand population structure. The scat detection dog team currently operates in Namibia and Angola, contributing valuable data to cheetah conservation efforts.



HUMAN-CARNIVORE CONFLICT

Research on human-carnivore conflict plays a vital role in cheetah conservation, especially since many cheetahs live outside protected areas and coexist with rural livestock farming communities in Africa. CCF recognizes the importance of considering farmers' needs in developing management plans that benefit both their livestock and wildlife, including cheetahs. To address conflicts, CCF evaluates and implements non-lethal predator control tools and livestock management techniques. One successful approach involves the use of livestock guarding dogs, which effectively protect livestock and reduce the need to remove cheetahs from the ecosystem. CCF's Future Farmer of Africa training programs disseminate these conflict mitigation techniques, and their Model Farm demonstrates their successful implementation. These efforts aim to foster coexistence between farmers, wildlife, and cheetahs, ultimately supporting conservation outcomes.

ILLEGAL WILDLIFE TRADE STUDIES

To combat the illegal wildlife trade, CCF has collaborated with Somaliland wildlife authorities to establish a Cheetah Research and Conservation Center. This center is dedicated to rescuing and rehabilitating nearly dozens of animals that have been rescued from the pet trade. Genetic samples from all confiscated animals have been collected, allowing CCF scientists to gain insights into their origins and better address the issue of illegal wildlife trade. Furthermore, CCF has received samples from veterinary and breeding facilities in the UAE, further enhancing their research and conservation efforts in combating this trade.

COLLABORATIVE RESEARCH PARTNERSHIPS

CCF has long-term research partnerships with academic and research institutions around the world, encompassing a broad spectrum of subject matter pertaining to the cheetah. CCF also maintains close ties with zoos and wildlife parks to collaborate on projects involving captive cheetah populations and genetics.

LEARN MORE



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