

CONSERVATION BIOLOGY

Will Captive Breeding Save Africa's King of Beasts?

One nonprofit claims its lion reintroduction program will ensure a stable population of the iconic predator; many experts are dubious

VICTORIA FALLS, ZIMBABWE—Two young male lions trail a middle-aged South African couple through parched savanna. The waist-high cats may appear to be stalking human prey, but suddenly, off script, they bound into the bush. Handlers with a company called African Encounter chase after the captive-bred lions and with threatening waves of sticks cow them back onto the trail. The predators are coaxed to pose for pictures with the two tourists, who have paid \$200 for the chance to take a wilderness stroll with the tame beasts.

“Walking with lions” may be little more than a petting zoo with claws. But the nonprofit African Lion and Environment Research Trust (ALERT) claims its captive-breeding and reintroduction program, supported by tourism revenue from the African Encounter operation, is “ensuring the future of the African lion.” ALERT, which also runs a breeding facility in Gweru, Zimbabwe, opened a lion-walk center in Zambia last December and plans to release a pride with seven female members into a 4000-hectare site there later this year. “No one has done what we’ve done,” says David Youldon, ALERT’s chief operating officer.

Some experts are unimpressed. They argue that ALERT’s program diverts donations and volunteer attention from efforts to stem what they say is the greatest threat facing lions: dwindling habitat. “There’s no sound science behind what they’re doing,” charges Paula White, a lion ecologist at the University of California, Los Angeles, Center for Tropical Research. “In most cases, lion reintroductions are poorly thought out, do little to benefit conservation, and use valuable resources that could be used to benefit existing populations desperately in need of protection,” adds Andrew Loveridge, a research fellow at the University of Oxford in the U.K. who studies lions in Zimbabwe. He doubts ALERT’s program is an exception. Youldon disagrees and says critics are missing the point. “We’re realists,” he says. “We think there has to be a commercial aspect.”

ALERT’s center, started in 2005, follows a standard reintroduction protocol. Before release, captive-bred animals live in incre-

mentally larger enclosures and are weaned off human contact. ALERT claims that “walking with lions” helps juveniles, taken from mothers when they are 3 weeks old, bond in a pride. “If it was pure science, you wouldn’t do it,” acknowledges Pieter Kat, a wildlife geneticist at *Investigação Veterinária Independente* in



Showtime. ALERT lion cubs play fight for tourists.

Lisbon and a scientific adviser to ALERT. “There is a tourism aspect involved, but they have to make ends meet.”

ALERT’s initial reintroduction foray met with mixed results. In August 2007, the center released seven lions into a 200-hectare enclosure near Gweru. Within 2 months, males had killed two females—uncharacteristically lethal aggression thought to be linked to a captive upbringing. ALERT removed the males and reconstituted an all-female pride that thrived for a year before the center was shuttered for renovations. The pride led a sheltered existence in the enclosure, says Roseline Mandisodza, a Zimbabwean ecologist who

studied it for her master’s degree. The release site was too small and had too few competing predators such as hyenas, cheetahs, or leopards to simulate hunting conditions in the wild, she says. “There is very little or no chance of [their] survival in the wild.”

To be fair, carnivore reintroduction is a high-risk endeavor. In 2001, Urs and Christine Breitenmoser, co-chairs of the World Conservation Union Wild Cat Specialist Group, reported that only 30% of felid releases are successful, and almost all of these were translocations, in which wild animals were moved from one habitat to another. Captive breeding and release is a more drastic approach but may be the only hope for critically endangered species such as the Iberian lynx, estimated at fewer than 200 individuals, and the Amur leopard, of which only 30 remain in the wild. Lions are a different story. With some 23,000 lions in Africa, the most pressing need is habitat preservation, not adding to an ample population, argues Luke Hunter, executive director of New York City-based cat conservation nonprofit Panthera. “Reintroduction of captive-bred animals as a means to establish wild carnivores is probably the last resort,” he says.

Unless, that is, the lion population were to crash—a possibility that ALERT says supports its program. Feline immunodeficiency virus (FIV), once thought to be a relatively harmless cousin of HIV, infects more than 90% of wild lions. In a recent survey of 68 lions in Botswana, Melody Roelke, Stephen O’Brien, and colleagues at the U.S. National Cancer Institute found that 70% exhibited at least one AIDS-like symptom. ALERT’s captive-bred animals offer an opportunity to study FIV in a controlled environment, says Kat. “We can now track the progress of this virus among individuals, a difficult thing to do in the wild,” he says. Later this year, Kat and colleagues at the University of Glasgow in the U.K. will begin taking blood samples from infected lions and examine them for immunodeficiency.

But to Hunter and others, the FIV threat appears minimal and hardly justifies captive breeding—or walking with lions. “Even if ALERT was going to succeed, so what?” Hunter asks. “It’s not an answer at any scale that’s going to matter.”

—JERRY GUO

Jerry Guo is a writer in New Haven, Connecticut.