Ex-Situ Conservation: Worthwhile?

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A Zoo’s Role

AZA Accreditation

US Fish and Wildlife Service

Captive-bred Wildlife Registration\(^1\)

What types of wildlife are covered?

Not all breeding programs are the same\(^2\)
Requirements for a Successful Captive Breeding Program

Habitat preservation and management
- Protection of habitat from deforestation, degradation, and exploitation
- Restoration and management of degraded habitats
- Increase or maintenance of the number of preservation areas

Captive population
- Genetic and demographic management of the population
- Self-sustaining viable captive population

Field studies
- Regular censuses of the size, distribution, and genetics of the wild population
- Behavioral ecology studies (home range size, movements, habitat preferences, social organization, mating system, feeding, and anti-predator adaptations)
- Locating existing suitable habitat containing critical resources for reintroduction

Conservation education for long-term support
- Professional training through academic studies, workshops, internships, courses, and fellowships
- Determining the most appropriate public relations and educational strategies through surveys
- Public relations educational efforts using appropriate mass media (e.g., television, radio, magazines, and newspapers)
- Local community education, both formal and informal

Preparation and reintroduction of animals
- Choice of candidates and assessment of their characteristics for retrospective correlation with postrelease survival
- Training in survival techniques, including foraging and feeding, antipredator tactics, locomotion, and orientation
- Adaptation to local conditions at release site (food, climate and temperature, and disease)
- Release and long-term monitoring to evaluate causes of death and basis for survival
To Name a Few Things...

Self-sustaining captive population

Maintaining genetic diversity

Co-ops with other zoos but...

Quick domestication and adaptation to captivity

http://www.fs.usda.gov/Internet/FSE_MEDIA/fsbdev2_021382.jpg
A Few More...

Suitable habitat upon release

Release area must have sufficient carrying capacity

Site must be legally protected

Limited wild population in area\(^1\)

Lack of predators\(^2\)

Elimination of factors causing species decline (both pre- and post-captivity)

Hunting\(^3\)

Disease\(^2\)
And A Few More...(see our point?)

Pre- and post-release training\(^1\)
- 6 major areas of development

Cost Effective?
- Estimated to cost a half million dollars per species per year\(^2\)
- Competes for funding with in-situ conservation\(^2\)
- Cleansing diseased facilities extremely expensive\(^2\)
Supposed “Successful” Programs

Whooping Cranes

*Wild Ones*

Disease outbreak within captivity

Cost $12,000 per individual, per year

Black Footed Ferret

Cost $400,000 per survivor

90% mortality rate

Inbreeding occurred in reintroduced populations

Distemper

http://www.animalspot.net/wp-content/uploads/2015/05/Black-Footed-Ferret-Pictures.jpg
Where Do We Go From Here: Role of Zoos

What we’re NOT trying to say

“Nonrecovery” forms of captive-breeding

Public education

Research

In situ conservation

Where Do We Go From Here: Money Allocation

Less decision-making between high-quality, many small plots of land and large plots

Getting locals more involved in conservation

Fishing industry
In Conclusion...

There are too many requirements for a captive-breeding program to be successful.

Programs themselves are extremely expensive and ineffective.

Conserved funds should be allocated towards more economical and reliable methods.
Bibliography


Thanks for listening!
Any questions?