Black-footed Ferret Recovery Program

The black-footed ferret is an iconic species with worldwide attention.

Press Release

Tigers, Rhinos, Polar Bears And Elephants Among Most Threatened Species In 2009, Says World Wildlife Fund

Iconic Animal Populations Being Decimated by Poaching, Loss of Habitat and Climate Change

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WASHINGTON DC, December 16, 2008 – World Wildlife Fund today released its annual list of some of the most threatened species around the world, saying that the long-term survival of many iconic animals is increasingly in doubt due to a host of threats.

WWF's list of *"9 to Watch in 2009"* includes such well-known and beloved species as polar bears, tigers, gorillas, pandas, elephants, whales and rhinos, as well as the lesser-known black-footed ferret and vaquita. WWF scientists say these, and many other species, are at greater risk than ever before because of poaching, habitat loss and climate change-related threats.

"If we don't get serious about saving these spectacular species, it's quite likely that many won't be around in the years to come," said Tom Dillon, WWF's senior vice president for Field Programs. "The potential loss of some familiar and beloved wildlife should be a wake-up call that immediate action must be taken if we want to live in a world with wild elephants, polar bears, and tigers. At the dawn of the new year, our global resolution for 2009 should be to save these amazing species before it's too late."

WWF's "9 to Watch in 2009" list:

1. Javan Rhinoceros
2. Vaquita
3. Cross River Gorilla
4. Sumatran Tiger
5. North Pacific Right Whale
6. Black-Footed Ferret

Population: 500 breeding adults. Location: Northern Great Plains, U.S. and Canada.

Found only in the Great Plains, it is one of the most endangered mammals in North America because its primary prey, the prairie dog, has been nearly exterminated by ranchers who consider it a nuisance. Few species have edged so close to extinction as the black-footed ferret and recovered, but through captive breeding and reintroduction, there are signs the species is slowly recovering. WWF has been working to save the black-footed ferret and the prairie dog population upon which the ferrets depend.

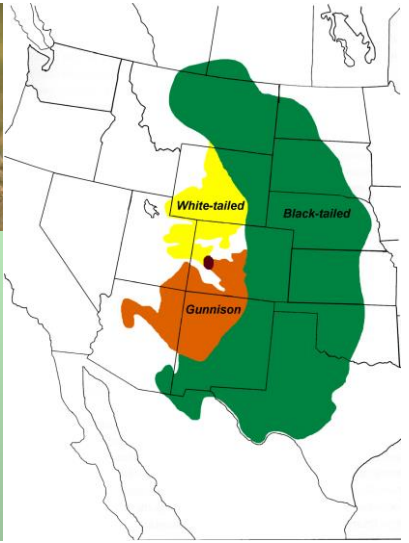
7. Borneo Pygmy Elephant
8. Giant Panda
9. Polar Bear

Partners & Participants

- **Federal Agencies** (FWS, USGS, USFS, BLM, NPS, NRCS, APHIS, US Army, BIA)
- **States** (AZ, CO, KS, MT, NM, SD, UT, WY)
- **Foreign Governments** (Canada, Mexico)
- **Tribes** (Cheyenne River Sioux, Ft. Belknap, Lower Brule, Northern Cheyenne, Rosebud, Navajo)
- **NGOs** (Audubon KS, Defenders of Wildlife, NWF, Prairie Wildlife Research, Turner ESF, TNC, WWF)
- **Zoos** (FWS NBFFCC, Smithsonian, Louisville, Cheyenne Mountain, Phoenix, Toronto)
- **Private landowners** (AZ, CO, KS, WY)

Historically, the black-footed ferret occupied an estimated 100 million acres of intermountain and prairie grasslands in the western U.S., Canada, and Mexico, within ~ 562 million acres of potential habitat. By 1987, there were no remaining wild ferrets.

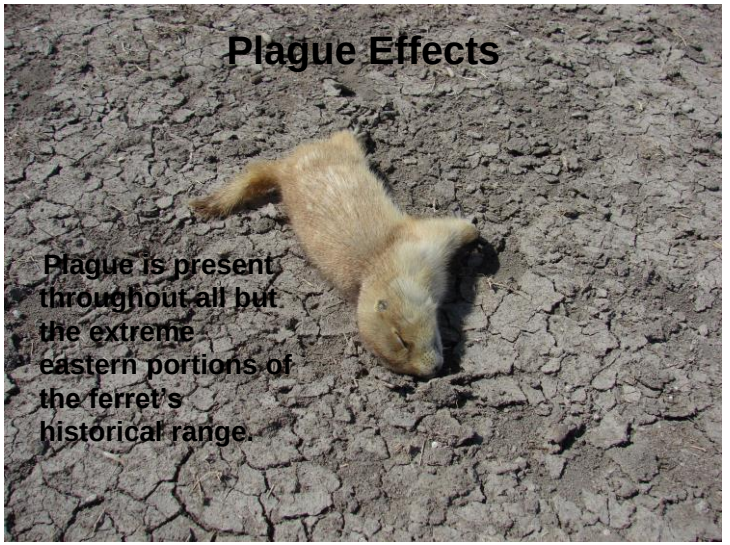
The historical range of the black-footed ferret coincided with ranges of the black-tailed, white-tailed, and Gunnison's prairie dogs. Approximately 85% of all ferrets occurred in black-tailed prairie dog habitat, 8% in Gunnison's, and 7% in white-tailed.



The decline of the black-footed ferret was tied to its close association with prairie dogs, which were dramatically reduced beginning in the late 1800s due to:

- Conversion of native range to cropland (1880s - 1920s)
- Large-scale prairie dog poisoning (1918 - 1972)
- Sylvatic plague (1940s - present)

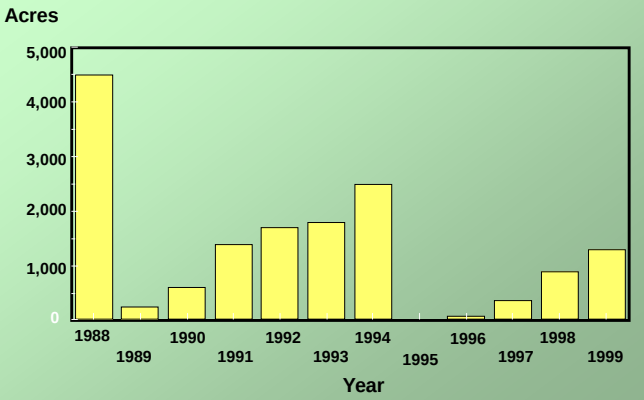
Plague Effects



Plague is present throughout all but the extreme eastern portions of the ferret's historical range.

Black-tailed Prairie Dog Occupied Habitat at Rocky Mountain Arsenal NWR

Fluctuations in Response to Plague



Plague Epidemiology

- **Caused by a bacterium in fleas**
  - **Transmitted by flea bite,**
  - **Transmitted pneumonically, or**
  - **Transmitted by ingestion**
- **Foreign to evolutionary history of North American species prior to 1900**
- **Ferrets & prairie dogs have little or no immunity and die quickly following exposure**
- **Other more tolerant rodents may act as enzootic hosts**

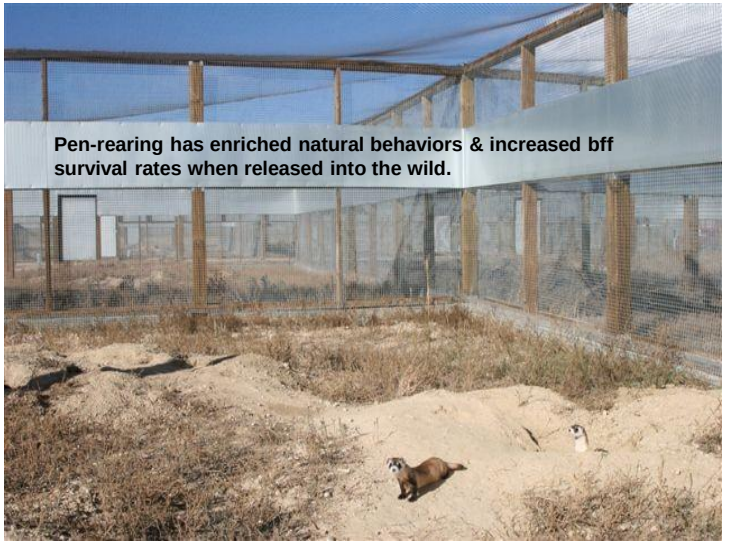
Plague Considerations

- Plague **directly** impacts ferrets via infection and subsequent mortality.
- Plague **indirectly** impacts ferrets via its effects on prairie dogs and subsequent dramatic declines in the ferret's primary prey base.
- Plague can be **managed** through ferret vaccination and vector control.
- Oral sylvatic plague vaccine research trials show promise.

USGS
science for a changing world

Captive breeding has been successful

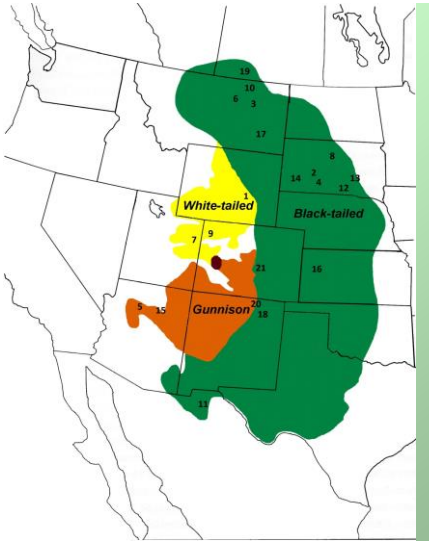
NATIONAL BLACK-FOOTED FERRET CONSERVATION CENTER
CARR, COLORADO (completed 2005, first kits 2006)



Pen-rearing has enriched natural behaviors & increased bff survival rates when released into the wild.

Reintroduction efforts have been successful

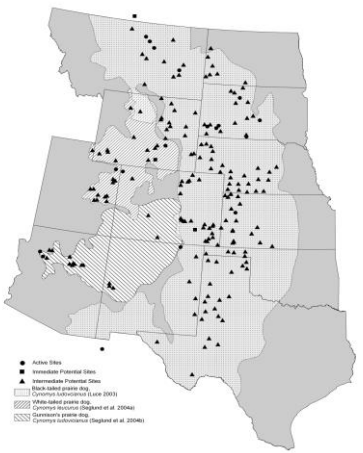
1851	Audubon & Bachman discovered black-footed ferret
1964	Presumed last population of bff found in Mellette Co., SD
1967	**Bff first placed on Endangered Species List**
1971	9 bff removed from Mellette to captive population at Patuxent
1974	SD population of wild bff extirpated
1978	First Recovery Plan approved
1979	Last captive bff from SD dies at Patuxent, **bff presumed extinct**
1981	**Wild bff rediscovered near Meeteetse, WY**
1987	**Last wild bff removed from Meeteetse**, due to disease
	First successful reproduction & weaning of bff in captivity
1988	Recovery Plan revised
1991	**First bff reintroduction** at Shirley Basin, WY
1999	**Captive population objectives reached** ≥ 240 breeding adults
	Number of wild bff at Conata Basin > population peak at Meeteetse
2000	**First reintroduced population (Conata Basin) with surplus kits available for translocation**
2001	Bff reintroduction at Janos, Mexico
2002	**Number of wild bff > number of captive bff**
2008	Successful captive breeding using frozen sperm
	Plague detected at Conata Basin
2009	Bff reintroduction at Grasslands NP, Canada
2011	Partners develop comprehensive bff recovery strategy
2013	Recovery Plan revised and Programmatic Safe Harbor Agreement completed; incentive program implemented



1) Shirley Basin, WY, 1991
2) Badlands NP, SD, 1994
3) UL Bend NWR, MT, 1994
4) Conata Basin, SD, 1996
5) Aubrey Valley, AZ, 1996
6) Ft. Belknap, MT, 1997
7) Coyote Basin, UT, 1999
8) Cheyenne River, SD, 2000
9) Wolf Creek, CO, 2001
10) BLM 40 Complex, MT, 2001
11) Janos, Mexico, 2001
12) Rosebud, SD, 2003
13) Lower Brule, SD, 2006
14) Wind Cave NP, SD, 2007
15) Espee Ranch, AZ, 2007
16) Logan County, KS, 2007
17) Northern Cheyenne, MT, 2008
18) Vermejo Ranch, btpd NM, 2008
19) Grasslands NP, SK, 2009
20) Vermejo Ranch gpd, NM , 2012
21) Walker Ranch, CO, 2013

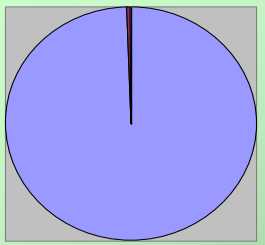
Additional Release Sites are Needed:

Past planning efforts need to be revisited and expanded



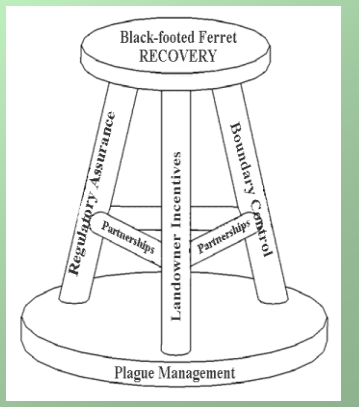
Locations of active, immediate potential, and intermediate potential black-footed ferret reintroduction sites (Luce 2008)

Black-footed Ferret Occupied Habitat: *Historically & at Proposed Delisting*



Management Challenges

- Regulatory assurances (Safe Harbor and existing 10j areas)
- Landowner incentives to increase tolerance of prairie dogs
- Boundary prairie dog control (where needed)
- Refinement of an oral plague vaccine for prairie dogs



Black-footed Ferret Programmatic Safe Harbor Agreement (BFF SHA)

- Provides regulatory assurances to non-federal landowners wishing to conserve BFF.
- Applies to all non-federal lands within the historic range of the BFF, including tribal lands.
- Expands and improves upon existing individual permitting approach.

BFF SHA Specifics

- A “zero baseline” SHA (including existing reintroduction sites).
- Permit is issued to BFF Recovery Coordinator for a 50-year term.
- Individual landowners will be issued Certificates of Inclusion (CI).
- Each CI will be accompanied by a site-specific reintroduction plan with a minimum 10 and maximum 40 year term.

BFF Reintroduction Plans

- Developed jointly by FWS, landowner, state resource agency, tribes, consultants, etc.; final approval is by the BFF Recovery Coordinator.
- Delineates conservation and management zones for enrolled property.
- Defines monitoring, prairie dog management, and plague management strategies; may include forage incentives and boundary control if approved.
- Attached to each CI.
- May be amended as conditions change.

Incidental Take

- Incidental take for cooperators is provided by the permit, and by extension the CI.
- Incidental take for non-participating landowners (including federal lands) is provided by the Biological Opinion for the permit issuance.
- Take is ***unlimited*** for animals that move beyond the Conservation Zone as defined in the CI and Reintroduction Plan.
- Covers ***all*** land management practices except for cultivation of rangeland and toxicant use in Conservation Zones.

BFF SHA Expected Outcomes

- BFF Recovery Coordinator will assess potential cooperators ***very*** carefully; addressing concerns by neighboring landowners, state resource agencies, and local governments will be key.
- A crucial step in the development of additional reintroduction sites, and BFF recovery as a whole.
- Ideally will be a precursor to rangewide landowner incentive and prairie dog boundary control initiatives.

1986, *Nature* (Robert May): "If such a mess can be made of efforts to save a creature as attractive as the black-footed ferret in a country as well organized and prosperous as the United States, prospects for conservation in other parts of the world are indeed bleak."

2008, IUCN Press Release: "The most comprehensive assessment of the world's mammals has confirmed an extinction crisis, with almost one in four at risk of disappearing forever …. but it is not all bad news. The assessment of the world's mammals shows that species can recover with concerted conservation efforts. The black-footed ferret moved from extinct in the wild to endangered after successful reintroductions into eight western states and Mexico from 1991-2008."