Red Wolf Recovery Program

Photo credit: Barron Crawford/USFWS

4th Quarter Report

July - September 2010

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Wildlife Biologists: Art Beyer, Chris Lucash, Ford Mauney, Michael L. Morse
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Outreach Coordinator: Vacant
Administrative Assistant: Vacant
Intern (Caretaker): Janet Hohn

www.fws.gov/redwolf

trackthepack.blogspot.com

The Red Wolf Recovery Program

The red wolf (*Canis rufus*) is one of the most endangered canids in the world. Once occurring throughout the eastern and south-central United States, red wolves were decimated by predator-control programs and the loss and alteration of habitats. By the 1970s, these activities had reduced the red wolf population to a small area along the Gulf coast of Texas and Louisiana. To protect the species from extinction, the U.S. Fish and Wildlife Service initiated efforts to locate and capture as many red wolves as possible for the purposes of establishing a program to breed the species in captivity and one day reintroduce the species into a portion of its former range. More than 400 canids were captured in coastal areas of Texas and Louisiana, but only 17 were identified as pure red wolves. Fourteen of these wolves would become the founding members of the captive-breeding program and the ancestors of all red wolves existing today.

The first litter of red wolves born in captivity occurred in 1977. Within a few years red wolves were successfully reproducing in captivity, allowing the U.S. Fish and Wildlife Service to consider reintroducing the species in the wild. In 1987, four male-female pairs of red wolves were released in Alligator River National Wildlife Refuge (ARNWR) in northeastern North Carolina and designated as an experimental population. Since then, the experimental population has grown and the recovery area expanded to include four national wildlife refuges, a Department of Defense bombing range, state-owned lands, and private lands, encompassing about 1.7 million acres. However, interbreeding with the coyote (a species not native to North Carolina) has been recognized as a threat affecting the restoration of red wolves. Currently, adaptive management efforts are making progress in reducing the threat of coyotes to the red wolf population in northeastern North Carolina. Other threats, such as habitat fragmentation, disease, and premature mortality, are of concern in the restoration of red wolves. Efforts to reduce the threats are presently being explored.

Program Objectives

The current recovery plan (U.S. Fish and Wildlife Service, 1990) specifies the following objectives:

1) Establish and maintain at least three red wolf populations via restoration projects within the historic range of the red wolf. Each population should be numerically large enough to have the potential for allowing natural evolutionary processes to work within the species. This must be paralleled by the cooperation and assistance of at least 30 captive-breeding facilities in the United States.
2) Preserve 80% to 90% of red wolf genetic diversity for 150 years.
3) Remove threats of extinction by achieving a wild population of approximately 220 wolves and a captive population of approximately 330 wolves.
4) Maintain the red wolf into perpetuity through embryo banking and cryogenic preservation of sperm.

The Red Wolf Population

We estimate between 110 and 130 red wolves in the Red Wolf Recovery Area, but for the purposes of this report all population figures are comprised only of known wolves (i.e., wolves that are regularly monitored through either a functioning radio-collar or surgically implanted abdominal radio transmitter). Additional wolves are likely present, but have not been captured/radio-collared or their continued presence otherwise confirmed.

Population and Territory Status

A total of 70 known red wolves occupied the Red Wolf Recovery Area (i.e., 1.7 million acres in five counties in northeastern North Carolina) at the end of the fourth quarter of our fiscal year 2010 (FY 10). The population includes 26 packs (totaling 60 wolves) with 12 breeding pairs. An additional 10 wolves are not known to be associated with a pack. [A pack is defined as a known wolf maintaining an established territory who is either currently associating with or is known to have associated with another wild canid inhabiting the same territory.]

The Red Wolf Recovery Program documented nine litters (totaling 42 pups) born in the Red Wolf Recovery Area during the 2010 whelping season, but the pups are not included in the reported population numbers.

Wolf Pairings

Two breeding pairs (Gator pack and Kilkenny pack) were lost and one breeding pair (Beach pack) was formed during the quarter.

Wolf Captures and Radio Telemetry Marking

During this quarter, Red Wolf Recovery Program staff logged approximately 197 trap-nights. For that effort, no wolves were captured.

Dispersals

There were no known dispersals during the quarter.

Mortalities

Two known wolves from the Red Wolf Recovery Area died during the quarter; an adult female (904F) that was struck by a vehicle and a female pup (1821F) that was struck by farm equipment.

Disappearances

The Red Wolf Recovery Program lost radio contact with three wolves during the quarter, including an adult male wolf (1661M) from Gator pack, a breeding female wolf (1170F) from Kilkenny pack, and an adult female wolf (1539F) previously from L-Block pack.

Pack Summaries

The Pack Summaries *section has been indefinitely discontinued due to recent events and current circumstances involving the apparent illegal take of red wolves within the Red Wolf Recovery Area.*

Collaborations

Research

The Red Wolf Recovery Program provided financial and in-kind support for collaborative research with scientists at other institutions, including universities, interagency divisions, and non-government research organizations. These investigations required project staff to assist outside researchers and graduate students in their efforts to better understand red wolf ecology, ecosystem function, and conservation efforts.

Project Title: Wild canid genetic sampling in Eastern North Carolina.
Graduate Student: Justin Bohling (PhD student)
Committee Chair/Principal Investigator: Lisette Waits, PhD, University of Idaho

Project Title: The effects of parenthood on red wolves (*Canis rufus*) in northeastern North Carolina.
Graduate Student: Justin Dellinger (MS student)
Committee Chair/Principal Investigator: Troy Best, PhD, Auburn University

Project Title: Identifying management procedures to reduce red wolf-coyote interactions in eastern North Carolina.
Graduate Student: Joseph Hinton (PhD student)
Committee Chair/Principal Investigator: Michael Chamberlain, PhD, Louisiana State University

Project Title: Seasonal Cycles in Red Wolf Home Range Characteristics: A GPS Collar and Multispectral Satellite Image Study.
Graduate Student: Melissa Karlin (PhD student)
Committee Chair/Principal Investigator: John Chadwick, PhD, University of North Carolina at Charlotte

Project Title: Assessment of spatial and temporal activities of red wolves using GPS and VHF telemetry data.
Graduate Student: Melissa Karlin (PhD student)
Committee Chair/Principal Investigator: John Chadwick, PhD, University of North Carolina at Charlotte

Project Title: Dietary overlap between red wolves (*Canis rufus*) and coyotes (*Canis latrans*) in Eastern North Carolina.
Graduate Student: Justin McVey (MS student)
Committee Chair/Principal Investigator: Chris Moorman, PhD, North Carolina State University

Project Title: Evaluating potential effects of widening US Highway 64 on red wolves, Washington, Tyrrell, and Dare Counties, North Carolina.
Graduate Student: Christine Proctor (PhD student)
Committee Chair/Principal Investigator: Michael R. Vaughan, PhD, Virginia Polytechnic Institute and State University (Virginia Tech)

Project Title: Sperm morphology and motility of the red wolf (*Canis rufus*).
Graduate Student: n/a
Committee Chair/Principal Investigator: Albrecht Schulte-Hostedde, PhD, Laurentian University, and Gabriela Mastromonaco, PhD, Toronto Zoo

Publications

The following publications have gone to print in this quarter. A complete list of publications related to red wolves can be found at http://www.fws.gov/redwolf/biblio.html.

Mech, L. D., and R. M. Nowak. 2010. Systematic status of wild *Canis* in north-central Texas. Southeastern Naturalist 9:587-594.

Presentations

No presentations by collaborators were reported during this quarter.

Staff and Volunteers

The Red Wolf Recovery Program employs eight full-time staff, including the program coordinator, four wildlife biologists, a biological technician, an outreach coordinator, and an administrative assistant. The outreach coordinator and administrative assistant positions are currently vacant. The Red Wolf Recovery Program also benefits from an unpaid intern (Caretaker).

Outreach

Staff from the Red Wolf Recovery Program conduct presentations and attend events to inform and educate the public on the conservation needs of the red wolf and the restoration efforts of the Red Wolf

Recovery Program. As part of our effort to assist educators, red wolf "discovery boxes" that include materials about the red wolf are distributed to educational facilities upon request.

The Red Wolf Recovery Program also seeks to achieve a quality visitor and participant experience in the U.S. Fish and Wildlife Service's priority recreational uses on National Wildlife Refuges. Our outreach efforts focus on four of the six program elements, including wildlife observation, wildlife photography, environmental education, and interpretation, and are conducted frequently in partnership with ARNWR and PLNWR educators and volunteers.

Presentations

Date	Location	Audience	Length	Attendance	Presenter
July 22	Springfield IL	Red Wolf SSP	1 hr	~20	D. Rabon
September 2	Beaufort Co	Weyerhaeuser	1 hr	26	F. Mauney
September 9	Beaufort Co	Weyerhaeuser	1 hr	22	F. Mauney

Howlings

Date	Location	Event	Length	Attend	Presenter
July 7	ARNWR	Summer Howling	2 hrs	46	K. Wheeler D.J. Sharp
July 14	ARNWR	Summer Howling	2 hrs	64	K. Wheeler D.J. Sharp
July 21	ARNWR	Summer Howling	2 hrs	39	K. Wheeler D.J. Sharp
July 28	ARNWR	Summer Howling	Cancelled - Weather	0	K. Wheeler D.J. Sharp
August 4	ARNWR	Summer Howling	2 hrs	45	K. Wheeler D.J. Sharp
August 11	ARNWR	Summer Howling	Cancelled - Weather	0	K. Wheeler D.J. Sharp
August 18	ARNWR	Summer Howling	Cancelled - Weather	0	K. Wheeler D.J. Sharp
August 25	ARNWR	Summer Howling	2 hrs	35	K. Wheeler D.J. Sharp
September 10	ARNWR	Summer Howling	2 hrs	14	K. Wheeler J. Hohn

Website / Social Media

The Red Wolf Recovery Program recently launched a weblog to provide a fun and creative outlet that highlights the efforts of the Red Wolf Recovery Program staff in the conservation of the red wolf. The weblog combines text, images, videos, and links to other media related to its topic. The content includes

educational, informational, and general journal entries written by program staff, and allows readers to leave comments in an interactive format. The weblog can be found at trackthepack.blogspot.com.

Media Inquires

The Red Wolf Recovery Program responded to numerous media inquiries during this quarter, including International Wolf Magazine (article entitled "The Mexican gray wolf and red wolf still struggle for survival" in the "Wolves of the World" section of the Fall 2010 issue, available on-line at http://www.wolf.org/wolves/news/iwmag/2010/fall/wow_redmexicanwolves.pdf).

Partnerships

Species Survival Plan (SSP)

Species Survival Plan (SSP) captive facility coordination is based at Point Defiance Zoo & Aquarium (PDZA) in Tacoma, Washington. The SSP currently coordinates 40 captive red wolf sites at zoos and nature centers housing about 178 wolves. The following information is based on activities completed or conducted by the SSP Coordinator during the quarter reported. Additional information on the SSP can be found at www.fws.gov/redwolf or www.pdza.org.

The SSP Coordinator organized and attended the Red Wolf SSP master plan meeting at Henson Robinson Zoo (Springfield, IL) on July 22-23, 2010. Annual breeding and transfer recommendations for the upcoming breeding season were drafted and distributed. Following a 30-day review period by cooperating institutions, modifications to the document were incorporated then finalized and distributed. The SSP Coordinator extends his appreciation for all who were able to attend and participate in the master plan meeting, and a very special thanks to the staff at Henson Robinson Zoo for hosting the meeting.

The SSP Coordinator reported that many of the red wolves held at the existing captive-breeding facility were moved to the new off-site compound adjacent to Northwest Trek Wildlife Park in August. The new facility at Northwest Trek Wildlife Park (Eatonville, WA) replaces the off-site captive-breeding facility in Graham, WA, where red wolves were first brought to establish the managed breeding program in the mid-1970s. Expanding urban development made it necessary to seek a new off-site captive breeding location and ensure the flagship Red Wolf SSP facility would continue long-term population management efforts. [The development of the captive-breeding facility at Northwest Trek was made possible, in part, with funds from the Omnibus Appropriations Act 2009 (Public Law 111-8 – March 11, 2009), and the efforts of Congressman Norm Dicks (WA) and Congressman Heath Shuler (NC). An additional $179,000 was awarded to the Western North Carolina Nature Center (Asheville, NC) to upgrade their red wolf breeding and holding facilities.]

Lastly, the SSP Coordinator reported that the Red Wolf SSP received special recognition from the AZA Population Management Center for "Exceptionally Cooperative Team Effort," noting that many dedicated SSP cooperators attend planning meetings, participate in decision making, and comply with nearly 100% of recommendations. Congratulations to the Red Wolf SSP!

Island Propagation Sites

The U.S. Fish and Wildlife Service utilizes island sites to propagate red wolves and contribute to the restoration of a wild red wolf population, primarily by inserting island-born wolves into the wild population as a means to augment the wild red wolf gene pool with "under-represented" genes from the captive population. Currently, the Red Wolf Recovery Program cooperates with St. Vincent National Wildlife Refuge in maintaining a breeding pair of red wolves on an island site.

Red Wolf Coalition

The Red Wolf Coalition (RWC) is a non-profit organization based in northeastern North Carolina that advocates for the long term survival of red wolf populations through education and outreach. The RWC's educational program teaches students about the history, biology, and status of the red wolf recovery program, and accompanies students to ARNWR and PLNWR to learn about the habitat of the red wolf. The RWC currently employees an Executive Director, and has a membership of approximately 400 individuals and organizations. Additional information on the RWC can be found at www.redwolves.com.

Announcements

On August 25, 2010, the Red Wolf Recovery Program lost long-time friend and colleague, Warren T. Parker. Warren started his career as a wildlife biologist at Savannah National Wildlife Refuge in 1957 after serving in the United States Air Force in Germany during the Korean War. In 1984, Warren was hired as the Red Wolf Recovery Program's first project coordinator, with the purpose of restoring red wolves in the wild. That goal was accomplished in 1987 with the release of four male-female wolf pairs in the newly established Alligator River National Wildlife Refuge. Warren's contribution to the restoration of red wolves earned him the Governor's Award for Conservationist of the Year in 1987. Warren retired after 34 years with the U.S. Fish and Wildlife Service in 1991. The Red Wolf Recovery Program extends their deepest sympathies to the Parker family.

The U.S. Fish and Wildlife Service continues the investigation of the suspected illegal take of two radio-collared red wolves found dead in two different locations in Hyde County, North Carolina. The first wolf was located on April 23, 2010, near Englehard. The second wolf was located on April 27, 2010, near Scranton. Contributions from various organizations and individuals have increased the amount of a reward of up to $15,000 for information directly leading to an arrest, a criminal conviction, a civil penalty assessment, or forfeiture of property on the subject or subjects responsible for the suspected unlawful take of these red wolves. The red wolf is protected under the Endangered Species Act. The maximum criminal penalties for the unlawful taking of a red wolf are one year imprisonment and $100,000 fine per individual. Anyone with information on the deaths of these red wolves or any others, past or future, is urged to contact Special Agent Sandra Allred at (919) 856-4786, Refuge Officer Chris Smith at (252) 926-4021, or North Carolina Wildlife Resources Commission Officer Robert Wayne at (252) 216-8225.