

Red Wolf Journal

THIS ISSUE:

- Red wolf program receives national award
- Breeding season less than 30 days away
- IWC Magazine issue dedicated to the red wolf
- Captive Corner
- Red Wolf Coalition news
- Outreach activity
- Red Wolf Education and Health Care Facility nearly complete

More inside . . .

Note: The "Red Wolf Journal" replaces the "Red Wolf News." [Comments welcome.](#)

In the field . . .

While every season is field season for red wolf biologists, the period from early February through early May each year require them to tread lightly. Since this time frame represents the official breeding season for red wolves, adaptive management has shown that it is best to be as unobtrusive as humanly possible during this time.

There are currently approximately 20 packs accounted for in the 5-county recovery area in northeastern North Carolina, as well as a number of lone male and female red wolves. As individual wolves search for mates, the biologists prefer not to interfere with this traffic nor to hamper each individual's search for a partner.



The months between April and December keep the biologists very busy. They look for dens, conduct litter counts, trap for yearlings or coyotes (to change collar batteries, etc.), repair pens, track animal locations, and conduct telemetry flights. Preparation, analyses, and reporting of data and other documentation also occur during this time period. "

Program Highlights

On September 28, 2007, Bud Fazio, Red Wolf Team Leader, completed a Red Wolf 5-Year Status Review: Summary and Evaluation. Content sections are as follows:

General Information:

Reviewers
Methodology
Background

Results:

Recommended Classification
New Recovery Priority Number
Listing and Reclassification Priority Number

Review Analysis:

Application of the 1996 Distinct Population Segment Policy
Recovery Criteria
Updated Information and Current Species Status
Synthesis

Recommendations for Future Actions / References / Appendices

This 57-page document can be found on <http://www.fws.gov/alligatorriver/redwolf>.

Program Highlights (cont.)

OLF Update: The U.S. Navy is no longer considering Site C in northeastern North Carolina for the construction of an Outlying landing Field (OLF). Other sites in North Carolina and Virginia are being considered by the Navy for the OLF for the purpose of conducting intensive aircraft carrier practice landings and take-offs by Super Hornet FA-18 aircraft. Site C was the most controversial site with impacts to wildlife, communities, farms, and landowners, causing strong opposition from agencies and surrounding communities. U.S. Fish and Wildlife Service provided extensive data to the Navy regarding potential impacts to red wolves, waterfowl, and wildlife refuges. For additional information, visit the grass roots web site at <http://www.noolf.com>, or otherwise visit the Navy's own OLF web sites.

Get in the Game, Fall/Winter 2007, Official publication of the National Wild Turkey Federation whose membership consists of over 580,000 people in 50 states. The magazine printed an article from the USFWS, Red Wolf Recovery Program, titled: *Red Wolves and Coyotes – Can you tell the difference?* The editors included graphic images from the hunter education card as well as the size profile comparing the red fox, coyote, red wolf, and gray wolf. Article contents focused on the benefits of having red wolves restored to part of their home range in northeastern North Carolina and how this translates to a balanced and healthy ecosystem as well their role in controlling coyotes. (NOTE: The issue with the red wolf article was contained in an insert and the magazine containing this information was distributed to Weyerhaeuser hunt clubs.)

Recovery Implementation Team (RIT) – The team has been in operation since 1999 and is comprised of eight research scientists from disciplines including population genetics, canid ecology, population ecology, veterinary medicine, demographic (population) modeling and population viability analyses, and captive management. They meet bi-annually with the USFWS Red Wolf Recovery Program staff to discuss canid genetic data, behavior and social activity, pup survival statistics, coyote interaction and a host of other facts and figures. The information is presented in a number of different venues such as published papers, endangered species reporting, population models, and data sets. An extensive bibliography can be found on the red wolf web site.

As a result of these meetings, pup transmitters have been used with several litters, satellite tracking collars are being used as funding permits, an awareness of the eastern wolf and its similarities to the red wolf continue to be investigated, genetic tests continue to identify the red wolf as a distinct species, efforts to control the influx of coyotes into the recovery area are explored and implemented, and monitoring the saturation of the restoration area continues to be a priority. Another significant result of the RIT meetings is development of the management tool called “pup fostering.” Pre-selected captive born pups are inserted into wild litters. To date, all pups have been accepted by their new families.

More information about this team and its role in red wolf restoration can be found in a recent paper written by several RIT members: *From the Field: Implementing recovery of the red wolf – integrating research scientists and manager, Wildlife Society Bulletin 2005, 33(3):1145-1152.*

Red Wolf Recovery Program – Research

Justin Bohling, a Master's Candidate at the University of Idaho, is proposing to work on the following project: "Using Molecular Methods to Evaluate Genetic Composition of Wild Canids in Northeastern North Carolina" in collaboration with Lisette Waits, PhD, Associate Professor and Co-Director Center for Research on Invasive Species and Small Populations at UI. In Justin's words, "The goal of this project is to examine the genetic structure of wild canids in eastern North Carolina. We wish to determine if red wolf (*Canis rufus*) dispersal from the Red Wolf Experimental Population Area has had any effect on the genetic composition of the resident coyote (*Canis latrans*) population. Samples will be compared to genotypes from red wolves, coyotes from various locations in the U.S., gray wolves (*Canis lupus*), and domestic dogs (*Canis familiaris*) to determine ancestry. Justin hopes this research will provide a "clearer understanding of the genetic structure and distribution of wild canids in the eastern portion of the state . . . and help discern the various factors that influence the composition of the coyote gene pool."

As part of her graduate research, **Dr. Karen Beck,** a veterinarian, built a mathematical model to evaluate introgression as an infectious disease. This new approach to the problem led her to evaluate several different components of the Red Wolf Adaptive Management plan. She sterilized dozens of coyotes and coyote-wolf hybrids, evaluated telemetry data, and studied the impact of the Red Wolf Program's den work on short-term pup survival. All of these efforts provided input into a model she used to evaluate the potential impact of different intervention strategies for controlling hybridization.

Red Wolf Recovery Program – Research cont.

Anne E. Ballmann, DVM, PhD Dr. Ballmann provided the following research summary:

“Diseases can have a major impact on the survival of small, vulnerable populations of animals and monitoring of disease exposure is an important part of properly managing wildlife. A traditional method for learning what diseases a population of animals may be exposed to is known as a serologic survey. This method requires capturing individual animals from the population and obtaining a blood sample from each animal that can be tested for antibodies to different diseases. Besides the challenges of catching the animals and handling them safely, this traditional disease monitoring method does not allow wildlife disease experts to tell the difference between animals that actually have the disease and may be spreading it, and animals that may have been exposed to the disease and not gotten sick, or recovered long ago. To efficiently design ways to reduce disease spread, knowing which animals are actually spreading the disease and where is of prime importance.

Many diseases result in the shedding of the disease causing agents in the feces of infected animals. These disease agents such as viruses can remain detectable by their genetic signature for long times making it possible to examine feces collected from the field for the presence of the infectious agent using a technique known as polymerase chain reaction (PCR). My research evaluated fecal PCR assays designed to detect 2 potentially fatal viral diseases of wolves and other carnivores in North Carolina, canine parvovirus and canine distemper.

Blood and fecal samples were collected from a portion of the red wolf, coyote, black bear, bobcat, raccoon, and gray fox populations living in eastern North Carolina between 2003 and 2006. Results from serologic surveys demonstrated evidence of natural exposure to both canine parvovirus and canine distemper virus among the 6 species. Fecal PCR assays also confirmed that the viruses themselves are present in the region. Approximately 30-40% of red wolves and coyotes sampled had been exposed to the viruses prior to receiving their first vaccinations as part of the USFWS population management plan and many vaccinated red wolves did not have antibody levels in their blood that would be expected to protect them from future infections. These findings are important because they mean that fatal infections with these viruses cannot be ruled out as a possible cause for wolf pup recruitment losses observed each year. Radio-tracking studies are being conducted with juvenile wolves to better understand the fate of young wolves to help us design improved ways to reduce the impact of infectious diseases.

Research funding was provided by the USFWS Red Wolf Program, the Morris Animal Foundation, and the US EPA STAR Fellowship program.”

Dr. Jennifer Adams, PhD Dr. Adams graduated with a Doctor of Philosophy Degree with a Major in Natural Resources in the College of Graduate Studies, University of Idaho. The title of her Dissertation is: “A Multi-Faceted Molecular Approach to Red Wolf (*Canis rufus*) Conservation and Management.” The U.S. Fish and Wildlife Service and the Point Defiance Zoo and Aquarium, Tacoma, WA, provided funding for this project. The following information was taken directly from the thesis:

Abstract excerpt: “Recovery of the endangered red wolf (*Canis rufus*) depends upon the ability of the red wolf program to minimize hybridization with coyotes (*Canis latrans*). To accomplish this, the red wolf needs to locate the presence of coyote and hybrid individuals across the . . . experimental population area. In addition, the red wolf program must understand red wolf space use to determine if coyotes will be excluded from breeding opportunities. Finally, in order to predict the impact of hybridization with coyotes on the red wolf population, the red wolf program needs to evaluate the effect of hybridization and introgression since reintroduction.

Conclusions: “We have successfully reconstructed a large portion of the wild red wolf pedigree. This effort has allowed us to determine when the first F1 hybridization event occurred, how many F1 hybridization events have occurred, and how many of those events backcrossed into the wild red wolf population. With this dataset we now have the ability to address additional questions related to inbreeding and fitness, dispersal and reproductive success. We can also begin to access the conditions under which hybridization occurs in the wild red wolf population. For instance, does hybridization only occur on the periphery of the red wolf recovery area or when one mate of a breeding pair disappears? Results of the analysis indicate that the impact of coyote introgression on the wild red wolf population is far less than previously believed and the red wolf adaptive management plan has helped to decrease the impact of hybridization on red wolves.”

Red Wolf Species Survival Plan {RWSSP}

There is so much to report from the SSP cooperators that it is hard to know where to begin. Probably the most exciting news is that the Red Wolf Recovery Program was the recipient of the North American Conservation Award from the Association of Zoos and Aquariums (AZA). (9/19/07)



On behalf of the Red Wolf Recovery Program, Will Waddell, Red Wolf Species Survival Plan Coordinator, Point Defiance Zoo and Aquarium, Tacoma, WA, accepts congratulations from former Secretary of the Interior, Bruce Babbitt. (PDZA Photo)

Bud Fazio, Team Leader of the Red Wolf Recovery Program, had this to say about the award: “The Red Wolf Recovery Program gratefully acknowledges this prestigious national award from the Association of Zoos & Aquariums (AZA) and the recognition that it brings to all of the partnerships needed to save this endangered species. The award is a tribute to long-term conservation efforts in red wolf recovery. We thank all those who have dedicated many years of hard work through their involvement in the AZA Red Wolf Species Survival Plan, associated research and population management, propagation on island national wildlife refuges and parks, restoration of a wild population, scientific research, development of planning documents, museum assistance for specimen storage, and public education.”

What a great way to celebrate a year of anniversaries:

- 30 years since the inception of the captive management program
- 20 years since the first 4 pair of red wolves were released on the ARNWR
- 10 years of dedicated Red Wolf Coalition efforts on behalf of the red wolf

The red wolf web site contains a list of captive locations across the U.S. and the document contains information on whether or not red wolf viewing facilities are available. (<http://www.fws.gov.alligatorriver/redwolf.html>)

Red Wolf SSP Educators Summit

On October 26 and 27, Species Survival Plan (SSP) educators from zoos and nature centers across the US met to talk, plan and promote red wolf education. Also in attendance were representatives from the USFWS and the Red Wolf Coalition. The summit is held every two years and for 2007, it took place in red wolf country in northeastern North Carolina at the Elizabethan Inn in Manteo.

The comprehensive agenda was designed to bring educators up-to-date on red wolf restoration efforts, captive management, Red Wolf Coalition outreach, current field programs, and identifying educational goals and how best to achieve them. Working groups explored ideas, initiatives and creative fundraising. Projects were prioritized and action plans created with timelines attributed to each specific project. Three goals were established with targeted implementation during the next two years:

1. Begin the collection of an oral history of the Red Wolf Recovery Program by interviewing recovery pioneers, agency staff, managers and biologists.
2. Revisit the long-range plan to build a Red Wolf Center in red wolf country in northeastern North Carolina.
3. Establish a Web forum for red wolf educators to share ideas and programs. (Mark Macallister has already begun this effort.)

Evening R&R saw SSP members sampling Outer Banks cuisine, walking the Manteo waterfront and other Alligator River National Wildlife Refuge (ARNWR) areas, participating in a howling, and sometimes just reading a good book.

Craig Standridge, PDZA, and Pam Rout, Wild Canid Survival and Research Center, MO, were meeting facilitators.



SSP Educators focused on tasks.
Photo: PDZA – Craig Standridge

Island Propagation

Island propagation sites at St. Vincent and Cape Romain National Wildlife Refuges have played an important role in red wolf restoration for nearly 20 years. These sites provide a transition environment for red wolves as they learn to live independently in the wild. Hunting and survival skills will be needed once they are relocated to the red wolf restoration area in northeastern North Carolina.

This Fall, red wolf staff biologists traveled to Florida to assist Thom Lewis, wildlife biologist at St. Vincent NWR, with trapping several pups. The pups were brought back to the ARNWR and will soon be released into their new environment.



St. Vincent pups (Nordsven photo)

Each island propagation site has historically accommodated one red wolf pack. Once the pups are old enough to be caught and transported to ARNWR, a determination is made on the best release site. Factors contributing to this decision involve current pack locations, individual animals seeking a mate, available space, private property considerations, prey and habitat availability.



St. Vincent NWR (Nordsven photo)

Red wolves are transferred to North Carolina selectively at two different ages. If opportunities arise, pups less than 2 weeks old are fostered into wild dens, or dispersing wolves at age 18 months are translocated, paired and released.

Red Wolf Education and Health Care Facility

Yes, the facility is nearly complete! As you can see from the photos below, once the actual construction began, progress moved quickly. The outside of the building is complete for all practical purposes, and many interior tasks have also been completed including plumbing, electrical, insulation, walls, ceilings, and carpeting. It is anticipated that the facility will be operational in March, 2008.

The building is located on the Pocosin Lakes National Wildlife Refuge on NC94 in Columbia, NC, providing a convenient red wolf processing location within the recovery area. Art Beyer and Ford Mauney, biologists on the Red Wolf Recovery Program staff, serve as contract representatives for this project. Red wolf enclosures are eventually planned for the area between the back of the building and the forest as time and funds permit.



Reliable, the contracting company for this project, has offered to provide a sign at no charge to the USFWS. The draft design has been accepted by USFWS and will be transferred to a metal sign to be attached to the building.

Red Wolf Recovery Program Outreach



Wings Over Water Wildlife Festival is an annual event held in November and hosted by the U.S. Fish and Wildlife Service, Outer Banks Chamber of Commerce, Coastal Wildlife Refuge Society, Carolina Bird Club, Outer Banks Sentinel and the National Park Service. It offers programs for “paddlers, photographers, birders, and natural history buffs” who visit northeastern North Carolina to participate in the activities. The Red Wolf Recovery Program offers two howlings in support of the festival.



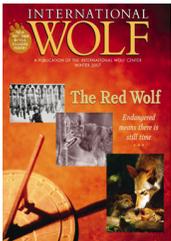
Elise McCauley Hammond won the 2007 Wolf Awareness Week national poster contest sponsored by the Timber Wolf Alliance, with the red wolf image on the left. Elise has painted other red wolf images over the years that have been used on posters, in the “Far Traveler” curriculum, and other publications. Thank you Elise!



Wendy Stanton, Wildlife Biologist at the Pocosin Lakes NWR in Columbia, NC, hosted a Wildlife Field Day for 47 4th and 5th grade students, 3 teachers and parent supervisors. She invited the Red Wolf Recovery Program to participate. Students learned about red wolf restoration, fire management, black bear populations in northeastern NC, the ecology of Pettigrew State Park and participated in many hands-on activities.

As the 2007 calendar year closes, the Red Wolf Recovery Program has worked with media, education facilities, community groups, federal agency colleagues and partners such as the Red Wolf Coalition, North Carolina Wildlife Commission, Recovery Implementation Team, and SSP cooperators in support of red wolf restoration. It is these cooperative efforts that support continued progress toward red wolf re-establishment in their historic home range. Red wolf program staff looks forward to continued education and awareness efforts for 2008 with plans to exceed the more than 20,000 people reached during 2007.

Red Wolf Coalition



The International Wolf Center also chose to focus on the red wolf for the entire contents of its winter issue. Cornelia “Neil” Hutt, Chair of the RWC, coordinated authors and did a major portion of the editing. An electronic version of the magazine can be found on several web sites including <http://www.redwolf@redwolves.com> and <http://www.fws.gov/alligatorriver/redwolf.html>. Contents include field highlights, red wolf history, Species Survival Plan information, red wolf facts and many other articles that make this magazine issue a “must read” for canid enthusiasts.

The Red Wolf Coalition (RWC) brought the “Wolves and Wildlands in the 21st Century” exhibit to Columbia, NC, from its home at the International Wolf Center in Ely, MN. The self-guided, interpretive displays featured six canid mounts. From May to October 2007, nearly 7,000 visitors saw the exhibit at the Walter B. Jones Partnership for the Sounds Visitor Center and made many positive comments in the Visitor’s Log.

Howling safaris were a repeated success for 2007. This season there was a \$5.00 per person charge, but that did not lower attendance numbers. Over 1,000 people participated in the 2007 howling safaris.

There is a lot more to learn about the RWC and its activities. Please read the “Tracker” newsletter at <http://www.redwolves.com>.

The Red Wolf Coalition (RWC) is a non-profit organization advocating for the long-term survival of red wolf populations by teaching about the red wolf and by fostering public involvement in red wolf conservation. The office phone number is: 252-796-5600 or visit the web site above.

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Ford Mauney, Wildlife Biologist
Ryan Nordsvén, Biological Technician
Diane Hendry, Red Wolf Outreach Coordinator

*The red wolf caretaker is a temporary position.
Details can be found on-line at
www.fws.gov/alligatorrive/redwolf

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