

THE VALUE OF RED WOLF CONSERVATION

Compiled by the Red Wolf Coalition

September, 2008

The Red Wolf Coalition (RWC) credits the following people for their content contributions to this document: Kim Wheeler, Executive Director, RWC; Cornelia Hutt, Chair, Board of Directors, RWC; Gina Schrader, Defenders of Wildlife; Bud Fazio, USFWS; Diane Hendry, USFWS; Arthur Beyer, USFWS; David Rabon, USFWS.

Imperiled species of "fish, wildlife and plants are of aesthetic, ecological, education, historical, recreational, and scientific value to the Nation and its people."

United States Congress in Section 2 of the Endangered Species Act of

BIOLOGICAL AND SCIENTIFIC VALUE OF RED WOLF RESTORATION

- The red wolf is believed to be native to North Carolina. Some evidence is as follows:
 - (a) Nowak (2002: *Southeastern Naturalist*) explains why red wolves are likely native to North Carolina and to the eastern seaboard, in general via his description of the origin of wolves in North America. [Based largely on morphological data, fossil evidence, and related theory. See attached map.]
 - (b) Records show Native American middens contain the faunal remains of wolves in northeastern North Carolina, another possible indicator of red wolves in the vicinity.
 - (c) Records from Tyrrell County (1700's) show bounties paid for wolves. Although these wolves may not be fully confirmed as red wolves, they do demonstrate that wolves occurred here. We believe these were red wolves.
- Many researchers believe the red wolf of eastern North Carolina represents the only wild population in the world.

- As predators native to North Carolina, restored red wolves fulfill their predator-related roles in their ecosystem, enhancing diversity, balance and stability. Restoring red wolves means restoring important functions to the ecosystem.
- The restoration of the red wolf to a portion of its historic range has local, state, national and international value as a model for recovery and management of other species.
- Recovery of the red wolf illustrates the positive effects of restoring a native species to historic territories and the ways in which restoration of an extirpated species affects other animals as well as plant species.
- Some credit can be given to red wolves toward control of nuisance species. For example, two dietary studies show that red wolves are known to feed on deer, nutria, raccoons, marsh rabbits and small rodents. We can assume red wolves contribute to control of these "nuisance species" with respect to crop damage by deer and rabbits and rodents, with respect to levee and road and farm equipment damage via nutria, and with respect to predation upon ground nesting birds (quail and turkey, etc.) and sea turtle nests (on island propagation sites) by raccoons. We know these benefits occur, but they have yet to be quantified in scientific or other well-designed studies.
- A balanced ecosystem, its predators (e.g. red wolves) included, means relatively healthy prey populations (deer, etc.) available for hunting, diversity and other functions on the landscape.
- The red wolf is an umbrella species. Ecosystems which support and conserve red wolves are likely ecosystems which maintain a diversity of other wildlife, plants, habitat and landscape features.

- **Soft release technique (from captivity to the wild) was developed for the red wolf and subsequently utilized in reintroduction of the gray wolf to the Northern Rockies.**
- **The technique of pup fostering was developed, and red wolf pups born in captivity were inserted into dens and raised by wild parents with their own offspring.**
- **The introduction of the red wolf, once declared functionally extinct in the wild, answered the question of whether a zoo-reared wolf would be too compromised by its upbringing in captivity to succeed in the wild.**
- **Valuable genetics research is currently being conducted to determine origin of this species, its relevance to wolf populations in eastern Canada (including Algonquin Provincial Park, Ontario) and whether or not red wolf genes persist in the wild outside the northeastern NC recovery area (southeastern TX and southwestern LA).**
- **While red wolves and gray wolves do prey on the young of ungulates, they also select old, physically compromised and otherwise vulnerable animals. Some scientists have concluded, therefore, that red wolves contribute to the overall health of ungulates such as the eastern white-tail deer.**
- **Red wolves may help to control over-population of prey species. There are data showing, for example, evidence that sea turtle hatching success increases when there are lower numbers of nest-raiders, such as raccoons.**
- **Restoration of the red wolf led to the development of an Adaptive Management Plan as it relates to the management of coyote population in northeastern North Carolina.**

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ECONOMIC VALUE RED WOLF RESTORATION

- **Wolves resonate with many people for many reasons. People want to see wolves both in captivity and in the wild, to hear**

them howl and to see sign of wolf presence. Red wolves attract visitors to the five-county red wolf recovery area.

Approximately 10,000 visitors toured the Red Wolf Coalition-sponsored "Wolves and Wildlands in the 21st Century" exhibit at the Walter B. Jones Center for the Sounds in Columbia, NC in 2007. Other well-designed red wolf programs can be important components for communities seeking to enhance ecotourism possibilities.

- Public support and dollars for red wolf conservation will make possible a Red Wolf Center where people can learn about the red wolf, its habitat and about other wildlife in North Carolina. Additionally, people can learn about the human role in conserving both endangered and non-endangered species and the habitat they need in order to thrive. Unlike the northern range of Yellowstone National Park which offers visitors the opportunity to view gray wolves in the wild, red wolf country with its dense vegetation makes red wolf sightings rare. A Red Wolf Center would attract visitors, allow them to see a resident exhibit group of wolves and provide opportunities for learning about wolves and wild lands.
- Over 1,000 people attend the "howlings" each year. This unique experience is popular with visitors to North Carolina. The events have even garnered exposure in national publications including *National Geographic* magazine and *The Washington Post*.
- The RWC and USFWS (separately and in partnership) reach out to over 20,000 people annually through events, festivals, school programming and presentations to community groups.
- Past economic studies (3 studies during the 1990's) show the red wolf can attract millions of dollars to local economies via ecotourism. Additionally, the Ursa International study by Gail Lash shows good potential to further enhance economic contributions across the Albemarle Peninsula and in the Inner Banks region, based on red wolf ecotourism.

- **Duke University, in partnership with Defenders of Wildlife, is currently conducting research evaluating “ecosystem services”—air and water purification, flood control, climate regulation and plant pollination—provided by conserving red wolf habitat in North Carolina. The proposed project centers on exploring and developing private market solutions to public wildlife conservation goods. Results from this research will provide a better understanding of (1) often-neglected and undervalued benefits of ecosystem services (2) how those services can be marketed and (3) how those services can contribute to both improved wildlife conservation and the economic well-being of North Carolina landowners.**
- **Economic contributions, based upon red wolves, can include multi-cultural values such as wildlife refuge values, farming, hunting, Native American heritage, and historic people and places.**

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POLITICAL AND LEGAL VALUE OF RED WOLF RESTORATION

- **The environmental movement gained momentum in the United States after more than two centuries of rampant destruction of the country's wildlife and wild lands. The citizens of this nation made the identification and protection of endangered animals and plants federal law under the Endangered Species Act (ESA).**
- **The ESA is the product of a political system that responded to a demand for consideration of imperiled species. It established as a matter of policy and of law the notion that endangered species protection is a worthy and desirable public good and that the Federal Government must consider the needs of animals and plants in any of the actions that it authorizes, funds or carries out.**

- The 1982 amendment to ESA created the option of an “experimental non-essential” designation, thus allowing managers to conduct a species reintroduction without adhering to all the restrictions of the original ESA. This designation set a precedent later used in other wolf reintroduction programs. It succeeded because it was reasonable and pragmatic rather than rigid and dogmatic.
- The USFWS recognizes the red wolf as the full species, *Canis rufus*.
- The State (North Carolina Natural Heritage Program) recognizes the red wolf with a status of Significantly Rare (i.e., “any species which has not been listed by the North Carolina Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state in small numbers and has been determined by the North Carolina Natural Heritage Program to need monitoring). The State also ranks the red wolf as S1 (i.e., critically imperiled in North Carolina because of extreme rarity or otherwise very vulnerable to extirpation in the state).
- The North Carolina Wildlife Resources Commission, in the Wildlife Action Plan, recognizes the red wolf in a list of species noted as “extirpated species, experimental populations, and/or species with questionable distributions in North Carolina” and “for those reasons, the species were not included in the priority listings by habitat or river basin” of the Plan.
- The State’s recognition of the red wolf on the protected animals list would provide additional benefits to the restoration of the species. State listing would acknowledge the red wolf as native to North Carolina, and would allow greater latitude for State and Federal employees and other partners to work openly and cooperatively on red wolf and coyote issues (e.g., planning for management of canids and canid diseases, assessing development project impacts). Listing the red wolf on the protected animals list might also facilitate additional

opportunities in the conservation of priority habitats or issues identified in the Wildlife Action Plan.

- State/federal cooperation is vital in all aspects of wildlife management (and related people management), including red wolf and coyote issues.

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SOCIOLOGICAL, CULTURAL AND ETHICAL VALUE OF RED WOLF RESTORATION

- The red wolf was the first predator to be restored to the wild after becoming effectively extinct in the wild.
- The red wolf program pioneered the relaxed protocol of the experimental and non-essential designations.
- Red wolf restoration has answered the question of whether or not humans would tolerate the close presence of a new, major predator. Wolves and humans can peacefully coexist.
- Whatever the red wolf is, taxonomists agree it has been around from 13,000 to 130,000 years, and historical records show it was a top predator in the Southeast. As a keystone species in the southeastern ecosystem, this animal has a strong presumptive case for deserving protection.
- The red wolf is a powerful educational tool for engaging students in understanding the value of wildlife and wild lands conservation.
- Red wolf outreach and education are as critical as biology to restoring this once “extinct in the wild” species. It is important for people to understand the ecosystem role of the red wolf, which means translating science into public understanding. This understanding leads, in turn, to policies that protect this canid.
- Red wolf restoration demonstrates the importance of maintaining and preserving natural areas amidst the challenges of growing human population numbers. Fewer rural

landscapes mean a limited number of red wolves in the world. High-density human population and degradation of natural habitat increases the probability of wolf-human conflicts.

- Native Americans believe that wolves and other wildlife hold special significance and are fellow beings on our earth to be respected, assisted and learned from.
- As part of a healthy ecosystem, red wolves maintain balance in prey populations, enabling or enhancing other cultural or aesthetic practices such as hunting, wildlife observation and outdoor recreation.
- Red wolves are native to the southeastern USA and thus contribute to regional lore and culture.
- Collectively, the expanding human population throughout U.S. history, especially during the past 400 years, has largely facilitated the extermination and extinction of large predators, the red wolf included. To this end, we are ethically bound to assist red wolves and other species toward recovery and a more stable future.
- "Endangered means there is still time." As long as red wolves exist, there are measures we can and should take to restore, stabilize, and recover the red wolf species.
- It is our ethical obligation to work to prevent the extinction of species, especially those in jeopardy because of human impacts.

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"The goal Congress set in the Endangered Species Act of 1973 was unparalleled in all of history. Our country resolved to put an end to the decades - indeed, centuries - of neglect that had resulted in the

extinction of the passenger pigeon and the Carolina parakeet...If it were possible to avoid causing the extinction of another species, we resolved to do exactly that. . . . When Congress passed the ESA, it set a clear public policy that we would not be indifferent to the destruction of nature's bounty. Our duty to stem that destruction derives from more than ethical considerations, though such considerations would be a sufficient basis for actionSome people in 1973, and unfortunately still some today, belittled the goals of this great Act by belittling the species it seeks to protect. How easy it is to dismiss the protection of a fish, a mollusk, even a plant, as a frivolity, and example of foolish environmental excess. But who will belittle the lowly mold from which the wonder drug, penicillin, was discovered? Who will belittle the rosy periwinkle, a species of African violet? Had it been allowed to become extinct, we would be without the drug that has made it possible for most victims of childhood leukemia to survive that dreaded disease. Preventing the extinction of our fellow creatures is neither frivolity nor foolish environmental excess; it is the means by which we keep intact the great storehouse of natural treasures that make the progress of medicine, agriculture, science, and human life itself possible. Living wild species are like a library of books still unread. Our heedless destruction of them is akin to burning that library without ever having read its books. . . .The ESA commits us to make our very best efforts to stem these unprecedented and irreversible losses."

John Dingell, Elected to the United States Congress in 1955