



**COROLLA WILD HORSE FUND**  
I N C O R P O R A T E D

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Hearing on H.R. 5482 Corolla Wild Horses Protection Act  
U.S House of Representatives  
Subcommittee on Insular Affairs, Oceans, and Wildlife  
Testimony of Karen H. McCalpin, Executive Director  
Corolla Wild Horse Fund, Inc. Corolla, North Carolina  
July 27, 2010

Chairwoman Bordallo and members of the Subcommittee, my name is Karen McCalpin and I am the Executive Director of the Corolla Wild Horse Fund. Thank you for the opportunity to testify in support of H.R. 5482, the Corolla Wild Horses Protection Act. I speak on behalf of the citizens of Currituck County, North Carolina, the hundreds of thousands of annual visitors who travel to the Outer Banks specifically to view the number one tourist attraction – our wild horses, and most importantly, I speak for the wild horses who have recently been designated by the North Carolina legislature as the North Carolina state horse. I would also like to express my gratitude to Representative Walter Jones for sponsoring the bill as well as cosponsors Representatives Howard Coble, Gerry Connolly, and Ed Whitfield.

**Background:**

Powerful, intelligent, breathtakingly beautiful, and determined to survive – the wild horses of North Carolina’s Currituck Outer Banks have survived nearly five centuries of fierce hurricanes, unrelenting nor’easters, severe droughts, floods, and swarms of biting insects. But can they survive the critically low herd number as defined in the current management plan as well as a scientifically documented dangerous decline in genetic diversity?

Spanish ships’ logs verify horses being brought to the shores of North Carolina around 1520. Historians believe that some horses were able to survive shipwrecks and swam ashore. Horses were also among the heavy cargo shoved overboard in an attempt to refloat ships grounded on sand bars and some were simply left behind when colonies failed.

Recognized and registered as Colonial Spanish Mustangs in 2007 by the national Horse of the Americas Registry (HOA), the wild horses now roaming the northernmost Outer Banks have adapted to a very specialized diet of coarse salt grass, sea oats, panic

grass, American beach grass, cordgrass, acorns and persimmons found in five main habitat areas. Areas of dune grass, dry grassland, wet grassland, tidal fresh water marsh, and maritime forest provide food and shelter. The Currituck Sound (a fresh water estuarine system) provides a constant source of water, as do numerous ponds, puddles, and manmade canals.

According to a 1926 National Geographic magazine article entitled “Motor Coaching the Outer Banks,” there were five to six thousand wild horses on the 175 mile stretch that makes up the Outer Banks. Today, the current herd count has dwindled to 86 – a dangerously low number.

DNA testing completed in 1992 by Dr. E. Gus Cothran, an internationally recognized equine geneticist and expert on wild herds, showed that the Corolla horses have “less genetic diversity than any other group of horses.” In 2008, DNA samples were collected via remotely delivered dart for an updated study of the herd’s current overall genetic health. Dr. Cothran reported that the horses had now reached a “genetic bottleneck,” with high levels of inbreeding and low levels of genetic diversity. Further mitochondrial DNA analysis confirmed that the Corolla herd has only one maternal line, while the wild Colonial Spanish Mustangs on Shackleford Banks (Cape Lookout National Seashore) have four maternal lines. The wild horses on Shackleford Banks have been managed at a target population of 120 – 130 since the passage of the Shackleford Banks Wild Horses Protection Act in 1998. Dr. Cothran generally recommends a herd size of 120 – 130 as the minimum for a feral herd.

The low Corolla herd size also presents an imminent danger to the survival of the horses that goes beyond high levels of inbreeding. When the number drops below the recommended absolute minimum of 110, the herd is at extreme risk for being completely wiped out by a disease, drought, fire, flood, or hurricane. They could easily be gone forever. The Corolla horses are already listed as a critically endangered breed by the American Livestock Breed Conservancy and the Equus Survival Trust, national nonprofit organizations that work to conserve rare breeds. The next category is extinction.

Until 1985, the paved road (NC 12) came to an end at what is now the Sanderling Resort in Duck, North Carolina. Only 4 wheel drive vehicles could access the next 25 miles to the North Carolina/Virginia border. A guard gate ensured that only the few permanent residents or their guests went any further. At that time, the wild horses had a territory encompassing nearly 13,000 acres. When the road from Duck to Corolla was paved in 1985, what was once a remote and rugged wild horse sanctuary with a handful of residents exploded with the development of thousands of vacation homes.

By 1989, so many horses had been injured or killed on NC 12 and horse/human interactions had become so frequent, a group of concerned residents formed the all volunteer Corolla Wild Horse Fund (CWHF). Members of the Fund set out to find ways to protect the wild horses. After much time, effort, and tears, the twenty or so wild horses left in Corolla were rounded up in 1995 and moved to the only remaining area

left with no paved roads. Referred to as the 4X4 beach or north beach, a sound to sea fence was built to keep the horses out of the populated areas of Corolla. A partial fence already existed slightly beyond the North Carolina/ Virginia border but had to be extended. Cattle guards were installed near the end of the paved road and at a gate along the northern fence. The cattle guards allow access by vehicles but not horses. The two fences are 11 miles apart. There were an unknown number of wild horses already inhabiting the north beach when the additional twenty were added.

The wild horses that once called the entire 175 miles of this barrier island their home, now live on approximately 7,544.25 acres of the north beach. Of that, 4,671.35 acres is privately owned by individuals and corporations; 2,495.4 is Currituck National Wildlife Refuge property; 326.5 is the North Carolina National Estuarine Research Reserve; and 51 acres is owned by the nonprofit Nature Conservancy. There are about 1300 houses in the three developed areas of Swan Beach, North Swan Beach, and Carova. People reach their houses and beach rentals by driving on the beach and over the dunes on sand cartways. (Attachment 1 – Wild Horse Range Acreage map)

### **Management Plan:**

A written management plan was created in 1997 by an advisory group (Currituck Outer Banks Wild Horse Advisory Board) consisting of representatives from the Corolla Wild Horse Fund (CWHF), United States Fish & Wildlife Service (USFWS), North Carolina National Estuarine Research Reserve (NCNERR), and Currituck County as well as two county appointed citizen representatives who reside on the north beach. The CWHF requested a herd size of at least 100, in sharp contrast to the federal representatives' position of zero. Even though the 1992 genetic study had already revealed low genetic diversity, the herd size was eventually set at a maximum of 60. This number was not selected based on any existing scientific data but was merely a number upon which all parties were able to agree after prolonged and contentious debate.

I began my duties as the first fulltime Executive Director of the Fund on September 4, 2006. After reading the management plan and as a life-long horsewoman I was stunned to see such a low maximum herd size. The management plan was due to be reviewed and signed again by the end of the year. Although I immediately recognized that a wild herd of 60 was not viable, being so new to the position, I had no scientific data available to support a request for a larger herd number. However, because the plan reads, "This plan will be reviewed and updated at least on a five year cycle. All signatories recognize that any management plan is a living document and will change based upon current circumstances," I felt that once I acquired data from a credible source the management plan could be changed "based on current circumstances" and "that all signatories recognize that any management plan is a living document."

In April of 2008, the Fund staff formally requested that the maximum herd size be changed to the scientific number recommended by Dr. Cothran in relation to his DNA findings from the most recent DNA samples. The Fund also requested permission to introduce a small number of mares from Shackleford to begin to restore diversity to the

dying gene pool. USFWS and the NCNERR denied the request citing the potential for damage to the refuge and reserve as a result of a larger herd, although there is no existing scientific data to support their denial. The Fund was told to continue to permanently remove healthy horses for adoption and dart healthy breeding age mares with contraceptives to work toward a herd size of 60. (Corolla: 7,544.25 acres; 60 horses; Shackleford: 3,000 acres 120 – 130 horses)

I turned to Congressman Jones for assistance and he traveled to Corolla in October of 2008 to meet with the Currituck Outer Banks Wild Horse Advisory Board. At this meeting, USFWS verbally agreed to allow the herd to remain at the current level then (100) until a multi-year exclosure study funded by North Carolina State University and USFWS could be conducted and the data analyzed. They again denied our request to change the written management plan and to date it remains at a maximum herd size of 60.

### **Impact:**

Before making my request for an increase in herd size, I spoke extensively with Dr. Sue Stuska, National Park Service Wildlife Biologist and Carolyn Mason, President of the nonprofit Foundation for Shackleford Horses. The Foundation, a small and unstaffed organization, works cooperatively through a Memorandum of Understanding with the National Park Service to manage the herd of wild Colonial Spanish Mustangs living on 3,000 acres of Shackleford Banks (an east/west island that is part of Cape Lookout National Seashore.) These horses are managed in accordance with the Shackleford Banks Wild Horses Protection Act as previously mentioned. This Act was also sponsored by your colleague, Walter Jones. In 1997, their herd was in danger of complete eradication. Called a “disturbing precedent” at the time by the National Park Service, the 12 years since the passage of the Act into Public Law 105-229 have elapsed successfully. The herd is maintained at a target population of 120 – 130 and the day to day management of the horses is conducted by the National Park Service Wildlife Biologist, Dr. Sue Stuska. The population is controlled through the physical removal and adoption of horses most closely related to one another and the administration of the non-hormonal contraceptive, PZP. “The horses are thriving and the island’s ecology is holding its own.” (The Wild Horses of Shackleford Banks by Carmine Prioli, 2007.) (3,000 acres; 120 – 130 horses)

I also conducted extensive research on the management of other east coast wild horses as well as existing impact studies before making my request. The Chincoteague ponies are owned by the Chincoteague Volunteer Fire Department and are grazed on two portions of the Chincoteague National Wildlife Refuge under a Special Use Permit between USFWS and the Fire Department. These ponies are managed at a herd size of 150 by the Fire Department. They reduce the herd by holding an annual auction of foals. The Assateague herd (VA) is managed by the National Park Service and maintained at 150 as well. No information was available regarding the disposition of any horses physically removed from the National Park.

The Journal of Range Management 57(3) May 2004 published a 1997 impact study by Drs. Richard D. Rheinhardt and Martha C. Rheinhardt titled "Feral horse seasonal habitat use on a coastal barrier spit." The research was funded by NCNERR and an airplane was furnished by USFWS. The objective was to obtain information on the relative preference for forage species by season and the seasonal utilization of forage habitat by wild horses. The study area extended from the northern end of Back Bay Wildlife Refuge in Virginia to Corolla, bounded on the east by the Atlantic Ocean and on the west by the Currituck Sound. The entire study area encompassed 11,414 acres. Results: "Horses consume few forb species and graminoid species seem to recover from grazing by early summer when primary production is highest. . . Because rooting impacts of feral hogs may be more severe than horse grazing impacts on Currituck Banks, enclosure experiments would have to be designed to separate horse grazing from hog rooting."

The Rheinhardt and Rheinhardt study also included an extensive list of plants eaten by wild horses and no plants grazed are included on the federal threatened species list. The wild horses of the Currituck Outer Banks eat only native vegetation (they are not supplementally fed hay or grain) and then reseed it in their manure.

Refuge Manager, Mike Hoff has pointed out that the endangered plant, seabeach amaranth has disappeared from the dunes and has suggested that the horses may be responsible for this. Research has shown that not only is the seabeach amaranth not eaten by the horses, the USFWS website states: "weather events, rainfall, hurricanes, temperature extremes and predation by webworms have strong effects on the length of the seabeach amaranth's reproduction season . . . Seabeach amaranth appears to be intolerant of competition and does not occur on well vegetated sites... The most serious threats to the continued existence of seabeach amaranth include the construction of beach stabilization structures, beach erosion and tidal inundation, beach grooming, herbivory by insects and feral animals and, in certain circumstances, by off-road vehicles." The north beach is directly affected by all of the above.

If we want to determine impact, we cannot overlook the animal that leaves the largest footprint of all – humans. On any given day in July, there can be 3,000 vehicles driving on the beach and behind the dunes. (Attachment 2 – cars driving along refuge dune line) Every day, the fragile dunes are compromised by humans walking over them, using them for sliding boards, and driving over them in off road vehicles. (Attachment 3 people on refuge dunes) It is not the horses that leave behind plastic bags, beer bottles, plastic water bottles and other trash. It is not the horses' trash near the piping plover nest. (Attachment 4 – nesting plover on refuge and trash) It is not the horses that leave deep tire ruts in the sandy the beach, or drop oil and other contaminates. (Attachment 5 – cement trucks stuck in front of refuge)

### **.Census:**

Before 2006, no official census records were found in CWHF archives. Beginning in 2006, aerial counts were conducted by the CWHF Herd Manager and the CNWR

Manager. Attachment A (Wild Horse Range Acreage, Corolla, NC) shows the entire horse range with CNWR and NCNERR property delineated.

- 2006 – 119 horses (CWHF Herd Manager, Steve Rogers; CNWR Manager, Tim Cooper)
- 2007 – 94 (CWHF Herd Manager, Steve Rogers; CNWR Manager, Mike Hoff)  
**26 horses on CNWR property; 68 on private property; 0 on NCNERR**
- 2008 – 101 (CWHF Herd Manager, Steve Rogers; CNWR Manager, Mike Hoff)  
**23 horses on CNWR property; 74 on private property; 4 on NCNERR**
- 2009 – (CWHF Herd Manager, Wesley Stallings; CNWR Manager, Mike Hoff)  
**0 horses on CNWR property; 84 on private property; 4 on NCNERR.**

The CWHF Herd Manager maintains a data base of the wild horses with photos, descriptions of physical markings and colors; health status, and identification of home territory. It is updated at least weekly and we are working cooperatively with Dr, Sue Stuska, NPS, Cape Lookout National Seashore, on purchasing and utilizing WHIMS (Wild Horse Information Software).

There are 24 – 25 harems (stallion and 1 – 4 mares) as well as groups of bachelor stallions evenly distributed over the 7,544 acres. Each harem stays in its own home region and generally remains there until the end of life. Straying from their home territory precipitates violent fighting between stallions and results in mares being stolen from their family group.

The CNWR has two areas fenced with high tensile electric wire to exclude wild horses. One fence is located in Swan Beach and covers 143 acres. An additional 135 acre fence was constructed in North Swan Beach in March of 2010. On March 12, 2010 CWHF Herd Manager Wesley Stallings removed 13 wild horses from within the newly fenced area at the request of CNWR Manager, Mike Hoff. These 13 horses were then forced into the home territory of other existing harems and violent fighting occurred for days as dominant stallions fought over mares and attempted to drive the intruders from the home area. One pregnant mare from the group removed from inside the fence miscarried a foal that would have been born in about a month. Another mare, whose body condition was good when removed, had to be euthanized a month later after her body condition deteriorated dramatically. She was captured by CWHF and an aggressive but unsuccessful week long attempt was made to save her life. Attachment 6 (a mare from one of the removed harems waiting in vain to return to her home.)

Attachment 7 (vegetation outside 135 acre refuge fence) is a photo taken on Thursday, July 22<sup>nd</sup>. The new refuge fence is in the background. As you can see, there is no overgrazing outside the fence. Attachment 8 (small enclosure and vegetation) is a photo also taken on July 22<sup>nd</sup> next to one of six 16' X 16' enclosures constructed as part of the current NCSU/USFWS study. There is also no evidence of overgrazing in these photos as well, even in this summer's drought conditions.

## **Wild Horse Management:**

The Corolla Wild Horse Fund is the NGO that physically manages and cares for the herd. We currently employ three fulltime staff (executive director, herd manager, director of operations), one part-time program coordinator and five seasonal staff. Ten volunteers serve as Sanctuary Patrol Officers who regularly assist with education on the beach and behind the dunes. Twenty volunteers are available to assist with captures or return of escaped horses. Another group of volunteers assist in our two mission related stores and with fund raising activities. We work closely with the Currituck Sherriff's Department regarding enforcement of the Currituck County Wild Horse Ordinance and any other issues regarding the safety of the horses and public. CWHF is on call 24/7, 365 days a year to respond to emergencies with the horses. We have rescued and rehabilitated 15 horses in the last three and a half years and found adoptive homes for 36 horses. CWHF maintains a monthly boarding contract at a private stable for horses awaiting adoption because they cannot be returned to the wild. The CWHF Herd Manager works with the horses to domesticate and train them and match them with a loving adoptive home. He is a natural horse trainer and a farrier. We routinely transport a formerly wild horse to offsite events for education and bring a gentled horse awaiting adoption to the grounds of our Wild Horse Museum every Wednesday from Memorial Day through October. (Attachment 9 – children petting rescued and gentled wild horse) For the last three years, four formerly wild horses have been ridden in the local Fourth of July parade on a street lined with 5,000 spectators.

CWHF also transports deceased horses to Raleigh for necropsy and covers all associated costs. It is also our responsibility to assist in veterinary euthanizations in the field.

The CWHF Herd Manager maintains all barrier fences including the cabled fence out into the ocean and CWHF routinely arranges for the accumulated sand to be removed from the cattle guards.

All expenses related to wild horse management are incurred by CWHF with no cost to the federal government for the exception of any costs that occur within the regular operations of the refuge or are defined internally by CNWR. The implementation of H.R. 5482 would not create any additional horse management costs as long as the CWHF continues to manage the herd. Currituck County contributes 25% of the CWHF's annual budget through occupancy taxes and CWHF raises the remaining \$300,000 through our nationwide membership program, our two mission related stores, donations, grants, and special events. Our free Wild Horse Museum educates over 75,000 national and international visitors annually. The CWHF distributes over 50,000 educational brochures each year, produces a quarterly newsletter, and has recently published a book.

In the last year CWHF has worked cooperatively with the county to create and implement a new ordinance prohibiting domestic horses on the north beach to eliminate the potential of disease (either housed on private property or ridden on the beach); to strengthen the existing County Wild Horse Ordinance by adding stronger language;

supported changes to the County' s Unified Development Ordinance to better monitor the actions of commercial horse tours; testified at a public hearing against commercial airboat tours in the private canals and Currituck Sound; collected and tested water, soil, and plant samples from all areas of the north beach; worked with area real estate companies to inform all persons renting in the Corolla area about the Wild Horse Ordinance; supplied jeep rental companies in Dare county with handouts regarding the Wild Horse Ordinance; and coordinated the campaign to designate the Colonial Spanish Mustang as the North Carolina state horse.

## **Land Conservation**

The CWHF holds 70 acres in a donated conservation easement and we are working with a local realtor (who is also a volunteer), to compile a list of available land for sale. Many lots have been on the market for a considerable time period or are unbuildable. The CWHF website lists land donation as a method of helping to protect and preserve the wild horses. Our September CWHF Board of Directors meeting will include an in depth discussion of a campaign plan to acquire donated land for placement in permanent conservation easements for the horses. I also had a preliminary conversation about land acquisition/conservation with state Representative Bill Owens on July 18<sup>th</sup> during his visit to view the wild horses.

The CWHF Herd Manager is currently working with Currituck County Cooperative Extension to determine what types of grasses can be seeded in our conservation area for additional use by the horses and is exploring methods to cost effectively open up more available grazing area in the conservation area.

The long-term goal of the Corolla Wild Horse Fund is to own significant land and place it in permanent conservation easements for use by the wild horses and other wildlife. The north beach of the Currituck Outer Banks is one of the last remaining underdeveloped coastal areas left. It is home to a wide variety of wildlife – including wild horses. As someone who travels that area frequently, I am constantly reminded how very important it is to protect and preserve what is left. I see it weekly and often times daily in the peak season.

## **Conclusion:**

For nearly 500 years, the wild horses of Corolla have persevered against all odds. I never tire of seeing them and I am always moved by their strength, intelligence and great beauty. They have a strong sense of family and grieve for lost members. Their will to live is unparalleled by any other breed of horse. They are without a doubt one of the most athletic breeds I have ever encountered.(Attachment 9 – floating trot of a stallion) These sons and daughters of the sand carry a wealth of genetic history that is quickly, not slowly, dying. High levels of inbreeding have already produced a few exceptionally small horses. We are seeing a decline in the number of foals being born and an increasing number of horses with other abnormalities.



The North Carolina State Horse will soon disappear from the northern Outer Banks. Managing the wild horses of Corolla at a maximum of 60 is managing for extinction. This is not just my opinion; it is the opinion of two world renowned equine geneticists, Dr. E. Gus Cothran and Dr. Phil Sponenberg.

In response to the April denial of my request for a larger herd size, Dr. Sponenberg, DVM, PhD. (professor of Pathology and Genetics, Department of Biomedical Sciences, Virginia-Maryland Regional College of Veterinary Medicine) wrote in an August 5, 2008 e mail to me: "In this, as in other cases, the competing interests need to somehow come to an effective compromise. I don't know what that will look like, but I do know that if a genetically isolated horse population is to be genetically secure for the future, then the total population must be much closer to 100 than 60."

The Corolla Wild Horse Fund is not asking for hundreds of horses. We are asking for a target population of 120 – 130 - the number recommended by scientific data generated by an expert in the field. This is the same number that has existed on federal property on Shackleford Banks for the last 12 years on half the land that is available to the wild horses of Corolla.

In the case of the wild horses of Corolla, just raising the allowable herd size alone will not solve the issue of our horses all being too closely related to one another. Introductions of mares from the Shackleford herd are the only way to breathe new DNA into a gene pool headed for certain collapse. I have already had discussions with Dr. Stuska and Carolyn Mason and both are in favor of moving mares to Corolla when they are available. Two to four mares at a time will be sure to become the instant family of a Corolla stallion or two. Their offspring would be genetically diverse.

The Corolla Wild Horse Fund has done an admirable job of managing wild horses in a complex and challenging environment with a small staff and a core group of dedicated volunteers. Like the wild horses, we are determined, and we find strength in their presence. (Attachment 10) I am honored to be their voice and ask you today to honor their history and protect their future. Please move H.R. 5482 forward and save these American icons for future generations to view, admire, and respect.