

Cape Lookout National Seashore Shackleford Banks Horses 2021 Annual Report

**National Park Service
Cape Lookout National Seashore
131 Charles Street
Harkers Island, NC 28531**

Site Location and Description

Cape Lookout National Seashore (the park) is located in the southern Outer Banks of North Carolina between Beaufort Inlet and Ocracoke Inlet. Here, the National Park Service (NPS) manages 56 miles of barrier islands. Shackleford Banks is the southernmost island in the park between Barden's Inlet to the east and Beaufort Inlet to the west. It lies south of the Town of Beaufort and Harkers Island. Shackleford Banks is approximately 8 miles long and ranges from less than 0.5 mile wide to nearly 1.5 miles wide where the eastern marsh islands are included.

Management Directives

Federal legislation passed in 1998 as 16 U.S.C. §459g-4 [1] and the subsequent 2005 Amendment by Congress 109-117;119-§2526 [2] to the legislation protects the wild horses within Cape Lookout National Seashore. The horses are cooperatively managed by the park and the nonprofit Foundation for Shackleford Horses, Inc., (Foundation). This annual report on the status of the herd covers the 2021 calendar year.

Horse Population

The population is managed with a legislated target range of 120 to 130 horses [2]. At the end of 2021 there were 121 horses on Shackleford Banks. Since 2005, when the last roundup was conducted, the year-end population has ranged between 105 and 126. No roundups are planned in the foreseeable future.

Gender and Age Structure

At the end of 2021, the herd was 61% female and 39% male. Part of the reason that there are more females is that some females are living longer. Of the 31 horses 15 years old and older, 4 are male. The oldest horse living on the island is a 28-year-old mare. Contraception has been linked to increased longevity among treated females [3].

Birth and Mortality

In 2021, eleven foals were sighted. Herd data with these 11 foals puts herd mortality at 6% (7 horses). This is consistent with the 6% average mortality from 1999 through 2020. The 7 horses included the oldest mare on the island at 28 and mares 26, 25 and 24 years old. Two 4-year-olds died; one of unknown causes and one was euthanized due to emaciation from a large leg wound which was later diagnosed as likely a foreign body infection. One sighted foal failed to thrive. Since 1999 the average lifespan of horses on Shackleford Banks has been approximately 11 years.

Genetics Data

Dung was collected from the foals of 2021 by standard collection protocol [4] to determine offspring genotypes. Analysis was done according to protocol by the Laboratory for Ecological, Evolutionary and Conservation Genetics at the University of Idaho [5]. The maternal and paternal genotypes are known from previous analyses, and, using them, foal paternity is being determined. The resulting lineage data will be used for decision making for management actions by the park and Foundation.

Contraception

Contraception has been used adaptively to manage the wild horse population beginning in 2000 [6,7,8,9]. Contraceptive doses are additive, with one dose providing, on average, one year of birth control. Judicious contraception use, along with natural births and mortality, should keep the herd as near as possible to the prescribed population range. No mares were contracepted in 2021.

Junior Ranger Activity: Wild Horse Protector

Junior Ranger Wild Horse Protector activities continued on Shackleford Banks. This activity is designed for students in grades 6 through 8 but can be adapted to younger or older students. An adult checks out a backpack holding binoculars, handheld GPS, salinity meter, range finder, a glossary, and instructions. Participants work through activities like those the wild horse Biologist performs during census work. On completion, students receive an award and are certified as Wild Horse Protectors.

Education Campaign

The Wild Horse Public Education Campaign (WHPEC), begun in 2011, continues. This is a collaboration between the park, the Foundation, and the nearby Rachel Carson Reserve National Estuarine Research Reserve (Reserve). The aim of the campaign is to educate people about the horses with an emphasis on the safety of the horses, park and Reserve visitors, and pets. The general message is to watch the horses without interacting with them or interrupting their natural behavior.

Foundation for Shackleford Horses

During the year, the Foundation contributed well over 2881 volunteer hours performing diverse work related to the Shackleford Banks horses both on and off the island [10]. Its Board of Directors is comprised of nine volunteers; additional volunteers contribute significantly. Any horses removed from the island are turned over to the Foundation and are cared for at its rescue farm and made available for adoption, if possible. The Foundation raises money to help fund wild horse program needs.

Citations

1. US Government Publishing Office Federal Digital System document, accessed February 22, 2016, <https://www.gpo.gov/fdsys/granule/USCODE-2011-title16/USCODE-2011-title16-chap1-subchapLXIII-sec459g-4>.
2. US Government Publishing Office Federal Digital System document, accessed February 22, 2016, <http://uscode.house.gov/statutes/pl/109/117.pdf>.
3. Jay Kirkpatrick, et al., "The practical side of immunocontraception: Zona proteins and wildlife." *Journal of Reproductive Immunology* 83 (2009): 151-157.
4. Lisette Waits, "Scat Collection Protocol," January 10, 2009.

5. Adams, Jennifer and Lisette Waits, "Paternity Analysis of Nine Foals Using Fecal Samples", Preliminary Report, January 11, 2016.
6. National Park Service, Cape Lookout National Seashore, Management Plan for the Feral Horse Herd on Shackleford Banks, 1996.
7. National Park Service, Cape Lookout National Seashore, Management Plan for the Feral Horse Herd on Shackleford Banks, 1999.
8. National Park Service, Cape Lookout National Seashore, Management Plan for the Shackleford Banks Horse Herd, 2005.
9. National Park Service, Cape Lookout National Seashore, Management Plan for the Shackleford Banks Horse Herd, 2010.
10. Foundation for Shackleford Horses. "Foundation for Shackleford Horses Volunteer Hours 2020-2021."