

Cape Lookout National Seashore Shackleford Banks Horses 2018 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 and Ocracoke Inlets. Here, the National Park Service (NPS) manages fifty-six 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 8.3 miles long and ranges from less than one half mile wide to more than 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 (<https://www.gpo.gov>) and the subsequent 2005 Amendment by Congress 109-117;119-§2526 (<http://uscode.house.gov>) to the legislation protects the wild horses within Cape Lookout National Seashore. The horses are cooperatively managed by the park and the Foundation for Shackleford Horses, Inc., (Foundation). This annual report on the status of the herd covers the 2018 calendar year.

Horse Population

The population is managed with a legislated target range of 120 to 130 horses (<http://uscode.house.gov>). At the end of 2018 there were 116 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

The herd is 62% female and 38% male. Part of the reason that there are more females is that some females are living longer. Of the horses over 20 years of age, there are only three males but there are 17 females. The oldest living mare during the year was 34 years old. Contraception has been linked to increased longevity among treated females (Kirkpatrick, 2009).

Mortality

In 2018, herd mortality was 9%. This is higher than the past 5 years which ranged from 4% to 7%. This is also higher than the average. However, mortality from 1999 through 2018 remains at 6%. In 2018, eleven horses died. The females were 34, 31, 24, 20, 20, 15 and 4 years old. The males were 19, 18 and 17 years old. One foal lived for 1 month. Since 1999 the average lifespan of horses on Shackleford Banks has been approximately 11 years.

Births

Eight foals were born in 2017. One (mentioned above) died at one month of age.

Genetics Data

Dung was collected from the foals of 2017 by standard collection protocol (Waits, 2009) to determine their genotypes. Analyses will be done according to protocol by the Laboratory for Ecological, Evolutionary and Conservation Genetics at the University of Idaho (Adams, 2016). The maternal and paternal genotypes are known from previous analyses, and, using them, foal paternity will be 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 (National Park Service, 1996, 1999, 2005, 2010). After 14 foals were born in 2017, four mares were contracepted in 2018. Contraceptive doses are additive, with one dose giving, 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. Treated were: a very thin 20 year old mare with four offspring on the island; a 13 year old with three offspring; a 10 year old with three offspring and an 8 year old with one offspring. The three older mares also have reproducing offspring: they each have a grandson or granddaughter on Shackleford Banks.

Junior Ranger: Wild Horse Protector

The Junior Ranger program grew by one program in 2018 with the Wild Horse Protector activity. Designed for students in grades 6 through 8, this program lets an adult check out a backpack with binoculars, handheld GPS, salinity meter and range finder. Participants work through activities that the wild horse Biologist performs during census work. On completion, students receive an award and are certified as Wild Horse Protectors.

The Wild Horse Public Education Campaign (WHPEC), begun in 2011, continues. This is a collaboration between Cape Lookout National Seashore, the Foundation for Shackleford Horses, and the nearby Rachel Carson Reserve National Estuarine Research 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 for Shackleford Horses, Inc., contributed well over 3474 volunteer hours performing diverse work related to the Shackleford Banks horses both on and off the island (FSH, 2018). Its Board of Directors is comprised of nine volunteers; additional volunteers contribute significantly.

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 2017-2018."