

# **Cape Lookout National Seashore Shackleford Banks Horses 2019 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 (<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 2019 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 2019 there were 111 horse 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 2019, the herd was 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 two males but there are 15 females. The oldest horses living on the island are two 26 year old mares. Contraception has been linked to increased longevity among treated females (Kirkpatrick, 2009).

## **Birth and Mortality**

In 2019, ten foals were born. Herd mortality was 12% (14 horses). This is higher than the past 6 years which ranged from 4% to 9%. This is also higher than the average (6%), but it does not change the average mortality from 1999 through 2018 which remains at 6%. The 14 horses were: two 25 year old mares, a 23 year old mare, a 22 year old stallion (which is old for a stallion but he had a beta stallion in his harem so presumably did not have to work as hard), a 21 year old mare, a 19 year old stallion, two 18 year old stallions (this is a normal death age for Shackleford Banks stallions, though one was in good condition so that was unexpected), a 7 year old mare (this was

unexpected), a 3 year old stallion (who was unusually thin) and four foals. Since 1999 the average lifespan of horses on Shackleford Banks has been approximately 11 years.

### **Genetics Data**

Dung was collected from the foals of 2019 by standard collection protocol (Waits, 2009) to determine offspring genotypes. Analyses was 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 has been 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). 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. Three mares were contracepted. Their ages were 9, 11 and 14; they each have four living offspring one of whom has an offspring on the island.

### **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. An adult checks out a backpack with binoculars, handheld GPS, salinity meter, range finder, a glossary and instructions. 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.

### **Education Campaign**

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 3200 volunteer hours performing diverse work related to the Shackleford Banks horses both on and off the island (FSH, 2019). 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 2018-2019."