

**Cape Lookout National Seashore
Shackleford Banks Horses
2013 Annual Findings Report**



Bachelor Stallion in the Marsh. NPS photo,2013.

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

Introduction

Federal legislation, passed in 1998, protects the wild (also called feral) horses within Cape Lookout National Seashore and requires an annual report on the status of the herd. This report covers the calendar year 2013.

The horses are cooperatively managed by the National Park Service (park) and the Foundation for Shackleford Horses, Inc. (Foundation), pursuant to the legislation and a Memorandum of Understanding updated in 2007.

Site

Cape Lookout National Seashore is located in the southern Outer Banks of North Carolina between Beaufort and Ocracoke Inlets. The park 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 is approximately 9 miles long and ranges from less than one half mile wide to more than 1 ½ miles wide where eastern marsh islands are included. (See Figure 1.)



Figure 1 - Shackleford Banks

Horse Monitoring

Horses are identified and monitored throughout the year. Identification is by a number of criteria including body color, mane and tail color, white face markings, and social group associations. Each horse is assigned an ID number. Some horses have their number freeze branded on their left haunches. Previously, all horses were branded, but now it is done only when positive identification is difficult. More than half of the horses have been assigned a number-letter ID in which the number represents the birth order within the year and the letter represents the year of birth. For example, horse 1A was the first horse born in 2013. (See Table 1.)

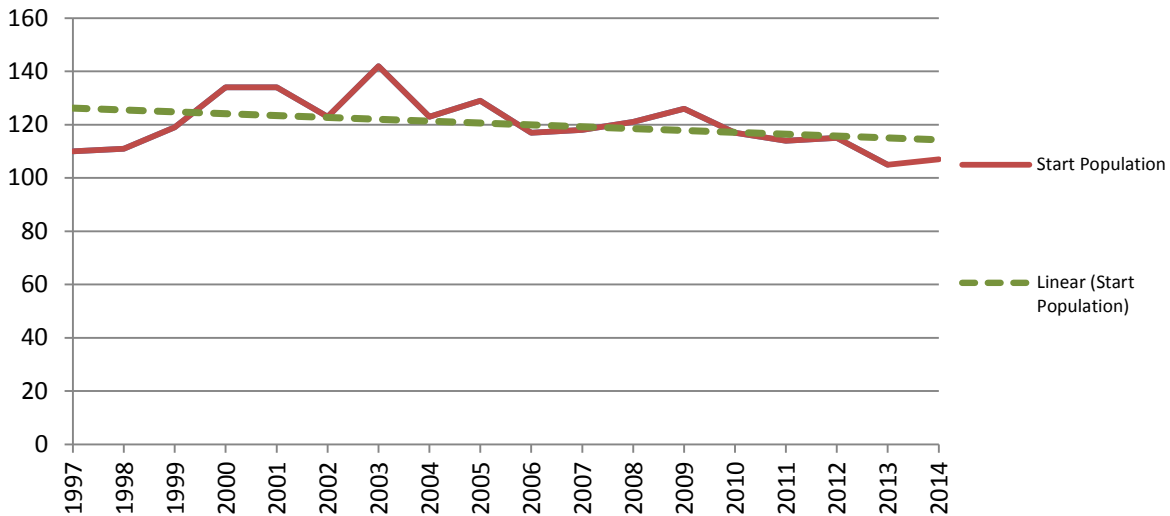
1-103	Through 1996	M	2002	W	2009
701 – 710	1997	N	2003	X	2010
G	1997	P	2004	Y	2011
H	1998	R	2005	Z	2012
J	1999	S	2006	A	2013
K	2000	T	2007	B	2014
L	2001	U	2008	C	2015

Table 1 - Horse Numbering and Lettering System

Population

The population is managed with a legislated target range of 120 to 130 horses. As of January 1, 2013, the official population on Shackleford Banks was 105. (See Graph 1.) This official number may be amended in future records if a horse in the population is later determined to be dead and, based on its last sighting, the death date is calculated to have been in 2013.

Horse Population by Year



Graph 1 - Horse Population by Year

Births and Foal Mortality

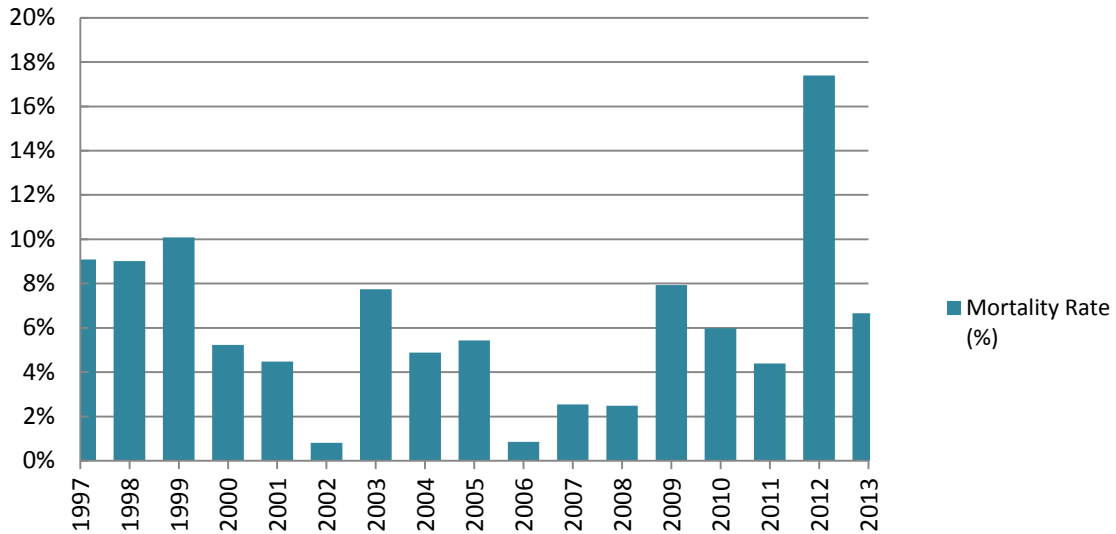
Nine foals were born in 2013. This is a higher number than 2009-2011 (five or six) but not as high as 2012 (eleven). Foal mortality was below average; one of the nine died before it reached one year of age.

Mortality

In 2013, mortality returned to the range of 1997 through 2011 with 7 deaths. The average mortality for 1997 through 2011 had been 5%. Because of the high mortality in 2012, the average mortality over all the years has risen to 6%. The record-setting oldest horse in the herd, a female, died at 30 ½ years of age. Four males considered to be close to the end of their natural

lives died at 15, 16, 17 and 18 years of age. One 2-year-old male and one male less than one year old also died.

Mortality Rate (%)

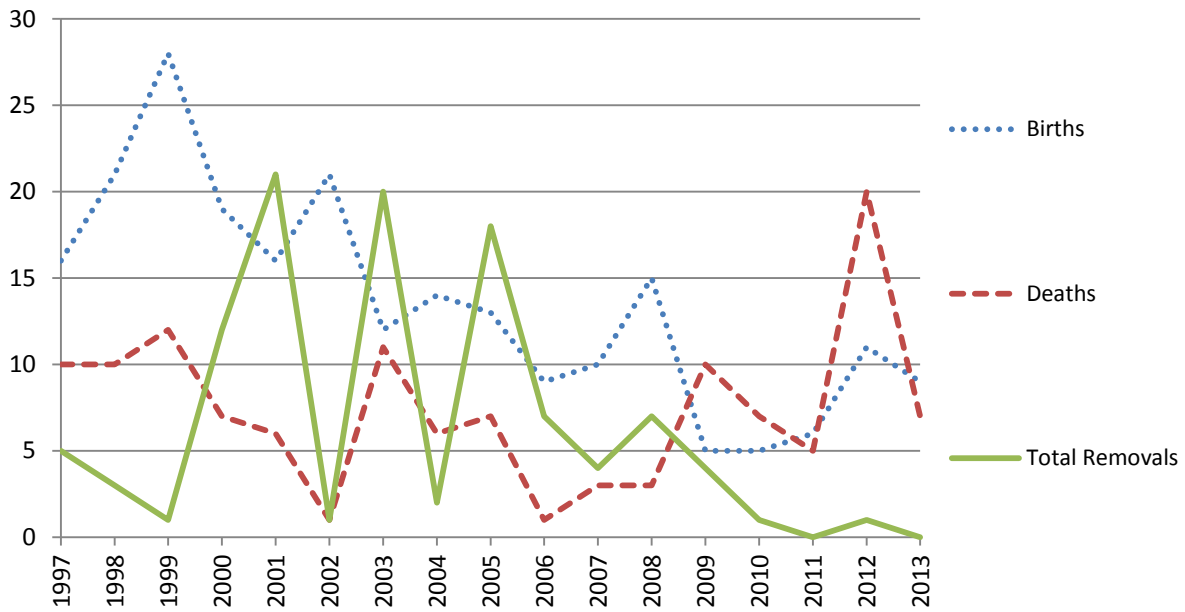


Graph 2 – Horse Mortality Rate in Percent

Adaptive Population Management

The population is adaptively managed using contraception and removal as needed. The generally decreasing birth rate has been due to the success of the contraception program. No mares have been contracepted for population control reasons since 2009 so the birth rate is now rising. When the population was high, horses were removed. The population has not been high so no horses have been removed for population reasons since 2009. (See Graph 3.) The management goal is to use contraception adaptively so that the population and viability are maintained without needing to remove horses in the future. Mortality is taken into account as are projected births when planning contraception strategies. Based on past years, five or more foals are likely in 2014.

Births, Deaths, Removals by Year

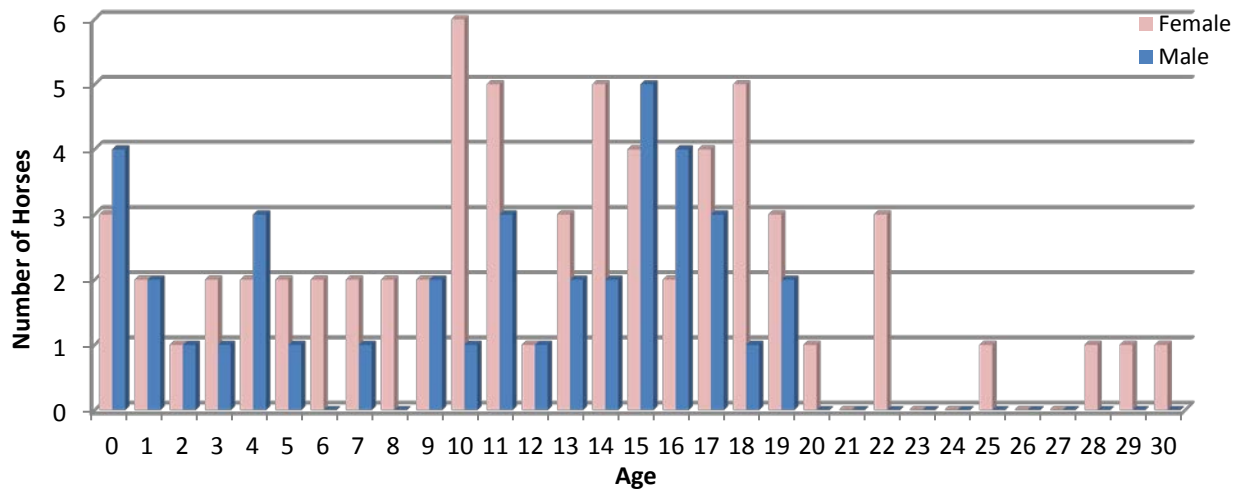


Graph 3 - Births, Deaths, Removals by Year

Herd Age and Gender Structure

The age and gender structure as of January 2, 2013, is shown. (See Graph 4.) The significantly larger number of females in the oldest age classes is due to the effects of contraception. Contraception has been shown to contribute to longevity of recipient females.

Male/Female Age Structure of Population (as of 1/2/2013)



Graph 4 - Male/Female Age Structure of Population (as of 1/2/2013)

Removal

Historically, horses were removed during roundups when a number of horses needed to be removed at once but now, with fewer births and with effective remote-delivery sedatives available, horses are removed individually as needed. Therefore, no roundups are planned for the foreseeable future. A goal of the adaptive management program is to avoid having to remove horses by using contraception adaptively

No horses were removed in 2013 because the population is below the legislated range. Horses that were removed in previous years are available for adoption by the public from the Foundation.

Contraception

Contraception has been used adaptively to manage the wild horse population, and currently is the choice over removal in management. The porcine zona pellucida (PZP) vaccine is delivered remotely under field conditions by Pneu-Darts with a projector/capture gun appropriate to the darts and distances. The drug is generally administered in the spring before breeding season begins and prevents the dosed mares from conceiving that year and foaling the following year.

Wild Horse Public Education Campaign

The Wild Horse Public Education Campaign (WHPEC) was begun in 2011. WHPEC involves Cape Lookout National Seashore, the Foundation for Shackleford Horses, and the nearby Rachel Carson Reserve (part of the North Carolina Coastal Reserve and National Estuarine Research Reserve system). The aim of the campaign is to educate people about the horses with an emphasis on safety of the horses, park/Reserve visitors, and pets. The general message is to watch the horses without interacting with them or interrupting their natural behavior.