

# 7<sup>th</sup>-8<sup>th</sup> Grade Science

## Goals 5

Objective 5.01 - 7<sup>th</sup> grade

Objective 5.02 - 8<sup>th</sup> grade

## Horse Story

### The Horses of Shackleford Banks

National Park Service  
Cape Lookout National Seashore  
Harkers Island, North Carolina



This set of curriculum materials is part of a series of guides developed by staff at Cape Lookout National Seashore and designed to connect classrooms with the seashore.

These materials are based on the 2006 North Carolina Standard Course of Study. Descriptions of the education goals and objectives that can be completed using these materials are included for educators in other locations.

The pre-visit and post-visit activities were created to be used in conjunction with a class visit to the park or a Ranger visit to the classroom. Contact the park for more information on scheduling a Ranger program, at the park or in the classroom.



**Cape Lookout National Seashore**

131 Charles Street

Harkers Island, NC 28531

(252) 728-2250

[CALO\\_Information@nps.gov](mailto:CALO_Information@nps.gov)

## Table of Contents

Overview of Pre-visit, On-site, and Post-visit Activities . . . . .	2
NS Standard Course of Study Goals and Objectives Filled . . . . .	4

### Pre-Site Visit

Perspectives on the Shackleford Horses Activity . . . . .	5
Perspectives on the Shackleford Horses Questions . . . . .	6
Wild Horses of Shackleford Banks brochure . . . . .	8
<i>Wild Horses of Shackleford Banks</i> , excerpt . . . . .	10

### On-Site Visit

Wild Horses and Federal Laws . . . . .	13
Horse Skull Basics . . . . .	14
Determining Age by Dentition . . . . .	15
Horse Age and Tooth Wear . . . . .	16

### Post-Site Visit

Post-Visit Knowledge Assessment . . . . .	17
Horse Speak Activity . . . . .	19
Horse Speak Activity – Students’ Page . . . . .	21
Horse Behavior Cards- Team Daisy . . . . .	22
Horse Behavior Cards- Team Darcy . . . . .	24
Additional Resources . . . . .	27

# Horse Story

## Overview

### Description:

The learner will be able to:

- Describe the lifestyle of the horses on Shackleford Banks
- Understand and describe various aspects of horse behavior
- Understand the protected status of the horses on Shackleford Banks
- Describe the National Park Service role in managing the horses of Shackleford Banks

Group Size: 5-30

Time: 60 minutes per class visit for on- and pre-site visit activities

On-site activity covers a one (1) day session

Location: Classroom

### Pre-Site Visit Activities: TEACHER COMPLETED

Knowledge Assessment (in post-site materials)

Perspectives on Shackleford Horses Activity

Perspectives on Shackleford Horses Questions

“Horses of Shackleford Banks” brochure (online)

“Wild Horses of Shackleford Banks” brochure

“The Ancestors of Jennifer, Jupiter, and All the Rest Were War Horses”

excerpt from *The Wild Horses of Shackleford Banks* by Carmine Prioli

### Discussion Points

- Although we depict the water cycle as a circular mechanism flowing continually from the ocean to the atmosphere to the land and back to the ocean, these elements do not follow each other in order. All of these elements are in play at the same time.
  - For example: Evaporation happens not only from the ocean, but at the same time from the land masses, and from surface runoff.
  - The water cycle is the constant movement of water on, in, and above the earth changing from liquid to vapor to ice and back again.

- The water cycle is a closed system.
  - The water contained on the earth is all the water we have. No new water is coming into the system.
- While the water cycle is a closed system, the water on Earth is all interconnected.
  - Water from Egypt may end up in England. Glacier ice from the Antarctic can find its way to the faucets of townhouses in Raleigh.
- Water originally came from superheated magma when the earth was first formed.
  - As the magma cooled, the water it contained evaporated cooling the atmosphere enough to allow water to accumulate on the surface as a liquid.

### **On-Site Visit Activities: RANGER COMPLETED**

#### Day 1

Detailed description of the lives of the horses of Shackleford Banks

Discussion of how horses survive on this island

Examination of two horse skulls

- One within the normal range
- One with a genetic anomaly

Overview of how determining horse age by dentition

### **Post-Site Visit Activities: TEACHER COMPLETED**

Knowledge Assessment

Horse Talking A Charade-Activity

Horse Talking A Charade-Activity-student page

Horse picture cards

Horse behavior cards

Teacher master packet of picture cards

Discussion Points

- They have learned a lot of information in the past few days about the horses of Shackleford Banks. Now they will have to use that knowledge to win the game.
- Only work within their teams. They must follow directions carefully or this activity will not work and they will let down their **team members**.

# Horse Story

## Goals and Objectives

### Seventh Grade

**NCSCOS Goal 5: The learner will conduct investigations and utilize appropriate technologies and information systems to build an understanding of heredity and genetics.**

**Objective 5.01:** Explain the significance of genes to inherited characteristics: Genes are the units of information, Parents transmit genes to their offspring, Some medical conditions and diseases are genetic.

### Eighth Grade

**NCSCOS Goal 5: The learner will conduct investigations and utilize appropriate technologies and information systems to build an understanding of evidence of evolution in organisms and landforms.**

**Objective 5.02:** Correlate evolutionary theories and processes: Biological, Geological, Technological.

# Perspectives on the Shackleford Horses

## Pre-Site Visit Activity

### Description:

Through an examination of materials discussing the horses of Shackleford Banks, students will learn how language can be used to persuade readers and how this affects the understanding of a subject.

### Materials:

“Wild Horses of Shackleford Banks” brochure

“Horses of Shackleford Banks” brochure

“The Ancestors of Jennifer, Jupiter, and All the Rest Were War Horses”

excerpt from *The Wild Horses of Shackleford Banks* by Carmine Prioli

Shackleford Horses - Questions

**Directions:** Time involved = approx. 60 minutes

1. Each student should receive a copy of each of the materials.
2. In pairs or alone, students should read and compare the brochures and excerpt.
3. Consider how each piece makes you feel.
  - Think about the language used and the facts that are highlighted or minimized.
4. Students should review these materials using the Shackleford Horses - Questions page.
5. After about 30 minutes, the class should discuss their answers thoughts on the questions below.
6. During the last 5 minutes, students should write down one question on an index card that they have about the horses. Collect the cards so they can be used during the on-site visit.

### Questions:

- Is the horse’s origin story the same in all three publications?
  - If not, what are the differences and the similarities?
- How are the rules and regulations presented in each publication?
- How is the story of the horses presented in each publication?
  - Is it romanticized or strictly factual?
- How does the author appeal to the readers’ emotions?
- Do the authors convince you to support their viewpoints?
- Does the publication try to capture your imagination or just relate information or does it do both?
- What emotions, if any, do you feel when you read these publications.
  - Do you feel differently when reading them, or do you feel the same about each one?
- Does one of them give you more of a positive feeling after reading it than the others do?
  - Which one? Why?
- How would you rank these (with #1 being the best)?
  - What criteria would you use to rank them?

# Perspectives on the Shackleford Horses

## Activity Questions

### Description:

Through an examination of materials discussing the horses of Shackleford Banks, students will learn how language can be used to persuade readers and how this affects the understanding of a subject.

### Materials:

“Wild Horses of Shackleford Banks” brochure

“Horses of Shackleford Banks” brochure

“The Ancestors of Jennifer, Jupiter, and All the Rest Were War Horses”

excerpt from *The Wild Horses of Shackleford Banks* by Carmine Prioli

### Questions:

1. Is the horse’s origin story the same in all three publications? If not, what are the differences and the similarities?
2. How are the rules and regulations presented in each publication?
3. How is the story of the horses presented in each publication? Is it romanticized or strictly factual?
4. How does the author appeal to the readers’ emotions?
5. Do the authors convince you to support their viewpoints?

6. Does the publication try to capture your imagination or just relate information or does it do both?
  
7. What emotions, if any, do you feel when you read these publications.
  
8. Do you feel differently when reading them, or do you feel the same about each one?
  
9. Does one of them give you more of a positive feeling after reading it than the others do? Which one? Why?
  
10. How would you rank these (with #1 being the best)?
  
11. What criteria would you use to rank them?
  
12. How do others in the class feel and think about the publications?

Write down one question on your index card that you would like to ask about the horses during the on-site talk with the Park Ranger. Leave your card with your teacher before you leave class.

## The English colonists had Spanish horses...

1400s: Columbus brought the first Iberian horses to the island of Hispaniola and had his colonists set up breeding ranches to supply "the little conquistadors" with mounts. The soldier-explorers usually rode stallions but Columbus made sure that mares were brought over when ever a ship was coming to the "New World".

1500s: Lucas Vazques de Ayllon's attempt to settle the Atlantic east coast failed due to sickness and Indian hostilities. Of the 500 colonists brought from Hispaniola only 150 souls caught a passing ship back home. We find no record of any later attempt to come back and claim the 89 to 100 horses that were left when the colony was abandoned.

There were also numerous shipwrecks along the shoals of this coast, and it is quite reasonable to believe that horses carried aboard those ships would have been strong enough to swim ashore.

1580s: Sir Richard Grenville traded with the Spanish in the islands for supplies and animals. He brought Spanish horses up the Carolina coast for the English colonists at Roanoke. His ship, Tiger, grounded near present day Portsmouth Island, and had to be careened (rolled over on her side) for repairs. It is at that point, some historians believe, that horses were released onto the Outer Banks.

The oral histories and traditions handed down generation after generation of the coastal people say that the horses have always been here...that they came ashore off sinking ships.



## FOUNDATION FOR SHACKLEFORD HORSES, INC. is a North Carolina nonprofit corporation

The Foundation for Shackleford Horses, Inc. is a 501(c)(3) nonprofit organization founded by local people who work for the protection of the wild horses. All directors, attorneys, accountants and other workers are non-paid volunteers. We depend on your tax deductible donations to fund our work for the horses.

***The Foundation is the only non-profit authorized by law and recognized by the federal government to work on behalf of the Shackleford Horses.***

To learn more about the wild horses, to make a donation, to become an Associate or to ask about adoptions, contact:

F.S.H., Inc.  
306 Golden Farm Rd.  
Beaufort, NC 28516

email: [info@shacklefordhorses.org](mailto:info@shacklefordhorses.org)

\*Visit the horses' web site at:  
<http://www.shacklefordhorses.org>  
and the Library of Congress' horse page at:  
[http://web.loc.gov/loc/entmain/propage/NC/ne-3\\_jh\\_jones6.html](http://web.loc.gov/loc/entmain/propage/NC/ne-3_jh_jones6.html)

## Wild Horses of Shackleford Banks



## "History on Hooves"

A Horse of the Americas Heritage Herd



"Darcy"



"Luke"

The Coastal  
NORTH CAROLINA'S  
SOUTHERN OUTER BANKS

# Welcome!

to Carteret County, home of the unique and wonderful Shackleford Banks Wild Horses.

As you enjoy watching the horses, please respect their requirements for space. Though used to seeing people, the horses **are** wild animals. Avoid the temptation of getting too close to the wild ones. Getting too close stresses the wild horses and you may risk getting kicked or bitten if a mare thinks you are a threat to her foal, or if a stallion thinks the security of his herd is being threatened.

To assist your enjoyment of the Shackleford Horses, bring a camera for

your visit. It will help to have a 200x lens or higher, so that you can get the best shots without invading the "space" of the wild horses.

Binoculars will also give you a close-up look without putting yourself or the horses at risk.

Sit back, relax and enjoy the beauty of the horses and their island, the breezes

from the sea, and the interaction of the individual herd members of one of North Carolina's most beloved and interesting cultural and historic resources...the wild Banker Horses of Shackleford.

~Thank you  
The Board of Directors,  
Foundation for  
Shackleford Horses, Inc.

"Saddle"  
with her mama

## "History on Hooves" ... the wild horses of Shackleford Banks

The wild horses of Shackleford are of interest to the scientific community as well as to the average citizen. An international expert on equine behavior, D. I. Rubenstein, PhD, Chairman, Dept. of Ecology and Evolutionary Biology at Princeton University, and his graduate students, have been studying and documenting the social behavior of the wild horses for over two decades. The territorial behavior of Shackleford stallions, observed in the 1980s, does not usually occur in wild horse populations. Dr. Rubenstein has also maintained a genealogy of the horses based on the dams of each succeeding generation of foals. Equine geneticists at Texas A&M, Virginia Tech, and University of California at Davis believe it is very important to preserve the genetics of this old breed.

.....

The Shackleford Banks wild horses are a unique historic and cultural legacy. Historical research and blood typing indicates that these wild horses descended from a core group of Spanish horses from 400 years ago. One genetic variant, Q-ac, is a very old marker, easily lost through genetic drift. Q-ac has been passed to descendants of Spanish horses, and has been documented through blood typing in the Puerto Rican Paso Finos, in the isolated Prior Mountain Mustangs of the Montana high country, and in the Shackleford Banks wild horses.

This Foundation's purpose is to protect and preserve the wild horses of Shackleford for their cultural, historic and genetic importance, and for the continuing interest and enjoyment of future generations of Americans. The Shackleford Banks wild horses are "A Horse of the Americas Heritage Herd"

## About the Foundation...

Our mission is to protect and preserve Shackleford Horses

This organization was founded, with support from the general public, as a result of concern for the continuing existence of these horses, and the determination to preserve a culturally important and historically significant asset in genetically viable numbers.

All persons involved with the Foundation for Shackleford Horses, Inc., including the Board of Directors, advisors, attorneys, accountant, and web designer are non-paid volunteers.

Our objective is to see that "History on Hooves," in the form of these living legends, remains an integral part of the history and cultural heritage of North Carolina and of Carteret County.

### The Foundation needs your contributions to:

- effect management guidelines
- continue genetics testing
- monitor the Shackleford Banks ecosystem
- complete individual reference records (registry)
- continue establishing links with experts
- expand informational/educational programs
- establish a mainland reserve herd
- create a museum/library/educational center
- conduct health and behavioral studies

### Take this

**opportunity** to become a part of the effort to preserve this heritage, and to ensure the continuing existence of these unique horses.

This three page excerpt from *Wild Horses of Shackleford Banks* by Carmine Prioli has been included in this curriculum guide with permission from the author.

*“The ancestors of Jennifer, Jupiter, and the rest were war horses.”*

PETER GRAVES, *THE WILD HORSES OF SHACKLEFORD*  
(DISCOVERY CHANNEL, 1985)

It is an article of faith among many residents of Carteret County that MissIsabel and the entire Shackleford herd are wild ponies whose ancestors were the proud mounts of the Conquistadors. Local tour-boat skippers rarely neglect to inform their passengers that those 16th-century horses first came to the Outer Banks by swimming ashore from wrecked or foundering treasure ships.

That image—or at least the Spanish connection—has persisted for many years, and it had a predictable effect on Discovery Channel filmmakers when they arrived in North Carolina in 1985 to document the scientific work of Professor Dan Rubenstein. The temptation to liven up equine behavioral science with romance and folklore for a national audience was irresistible. Movie star Peter Graves narrated the film before a wind-swept backdrop of grazing harems, battling stallions, sun-drenched dunes, and rolling breakers. Graves referred to Shackleford’s horses by name, as if he knew them personally. “The ancestors of Jennifer,

Jupiter, and the rest were war horses,” he confidently declared. Those horses had traveled to the New World in the most unpleasant way, “cradled in the holds of Spanish galleons.”<sup>1</sup> Because their arrival predated English settlement of the Outer Banks, the horses are therefore seen as the oldest living connection to our colonial legacy. Like their wild mustang cousins out west, the Shackleford horses are noble icons of bedrock American values—independence, self-reliance, freedom.

Other views—mostly those of non-locals or newcomers to the region—tend to be less patriotic and not at all romantic. They contend that Shackleford’s horses are not truly wild and that they aren’t Spanish either. If they have any colonial origin at all, the horses are the offspring of domesticated animals that came in the 1600s with English-speaking settlers from Tidewater Virginia. Those adventurous souls acquired their livestock from English breeders, whose horses contained little, if any, Spanish blood. As an “exotic” or non-native

of the few remaining wilderness areas in the American Southeast. Like the cattle, sheep, and goats that used to be their island companions, the Shackleford horses—say the critics—should also be removed.

At one time, there were heated and very public arguments over whether or not the horses had any right to remain on Shackleford Banks, and if so, how many should be there and how and by whom they should be managed. Although that debate is now mostly settled, issues related to the Shackleford horses can still generate impassioned discussion. Leaving aside for now the issue of Spanish ancestry, it's possible to address a pair of questions without risking too much of a stir. Are the members of the Shackleford herd ponies or horses? And are they truly wild? Simple questions. But in the matter of wild horses, simple questions rarely yield simple answers.

It is obvious to any observer that Shackleford's horses are smaller than most domesticated horses, but they are ponies only in the loosest definition of the term. Ponies are specific animals, like the Shetland and Welsh breeds, which grow only to 14.2 hands, or about 56 inches from the ground to the withers. (A hand, a unit of measurement dating to medieval times, equals four inches, or about 10 centimeters. Medieval war horses measured about 16 hands. A horse's withers is the high point where neck and back join.) Although the Shackleford horses are small—some say “stunted”—and typically average 12 hands<sup>2</sup> in the wild, their size is a consequence of their diet of *Spartina*, which com-

land as domesticated pets eat more balanced diets and are robust and full bodied. They show signs of growing taller than their island counterparts. In May 2005, a foal named Doña was born on the mainland of Shackleford parents also living on the mainland. It will be revealing to observe how tall Doña grows as she is fed manufactured horse feed and as she enjoys the shelter and veterinary care typically afforded domesticated animals. For now, wise folks simply refer to the Shackleford herd as “pony-sized horses.”

Are Shackleford's horses truly wild? If we overlook the fact that the herd is one of the most observed, studied, analyzed, and managed animal populations in the world, the answer is yes. On Shackleford, the horses are not fed or groomed by human hands. Nor are they provided water, even in times of drought. They are left entirely alone to mate, to play, to fight, and at times to injure each other. The alpha stallions protect their harems from sexual harassment by roving, curious bachelors. The alpha mares establish and maintain their authority within the harem and settle their own disputes. With the exception of the now-infrequent roundups that maintain the population between 120 and 130 horses, the herd receives no medical attention. With only rare exceptions—rescuing a stranded foal, for instance, or euthanizing a hopelessly injured animal—Shackleford's horses live and die without human interference. On a day-to-day basis, they could not be more wild.

However, there is only one truly wild breed of horses in the world, and it doesn't

explorer who was introduced to them on the edge of the Gobi Desert in 1878, they are the only surviving horses descended from non-domesticated animals. Until they were reduced by overhunting, Przewalski's horse—also known as the Asian wild horse—grazed the steppe country of Siberia, Mongolia, and northeast China and were never tamed or crossbred. Today, they have been reduced to a few breeding herds and live, ironically, in zoos in Russia, Europe, and the United States.

The prehistoric ancestors of horses were as free-roaming and untamed as mastodons and saber-toothed tigers. But those wild ancestors mysteriously disappeared some 10,000 years ago, leaving only domesticated horses to carry on the species. Strictly speaking, even “wild” horses grazing and living entirely on their own are actually feral animals.

Of course, none of this information has ever discouraged Down East citizens from calling their beloved Shackleford horses “wild ponies.” This unwillingness to alter what is true to their hearts and heritage was a major factor leading to the so-called Shackleford Banks pony war of 1997. That face-off between a grass-roots organization and the United States Department of the Interior resulted in a federal mandate—P.L. 105-229—intended to preserve both the horses and Shackleford. Popularly known as the Shackleford Banks Wild Horses Protection Act, the law in effect legislated the “wildness” of Shackleford's horses. It has also shaped the island's appearance and ecology.

Technology is the handmaiden of this leg-

Shackleford Banks—is largely a 21st-century fiction. Terms like EIA (equine infectious anemia, an incurable horse disease), PZP (Porcine Zonae Pellucidae, a birth-control vaccine), and the “Q-ac” variant (a genetic marker identified in DNA analysis by the EBTRL, the Equine Blood Typing Research Laboratory) constitute an obstacle course of information challenging anyone venturing to understand the lives of these animals, their destinies and behavior, and the hazards to their existence.

It is unlikely that the debate over whether or not the horses have colonial Spanish ancestry will be settled anytime soon. Genetic testing and the “Q-ac” marker offer tantalizing evidence of Spanish blood. But it can be said with assurance that, whatever their origin, Shackleford's horses will continue to enthrall local families and schoolchildren, politicians and lawmakers, entrepreneurs and business people, artists and musicians, writers and filmmakers, and, of course, tourists. And like MissIsabel, they will continue to teach us about matters much greater than themselves or ourselves—the relationship between creatures and the worlds they inhabit, the ever-growing human hunger for wildness, the changing character of wilderness preservation in the 21st century. Still, the colonial history of these animals is edifying and worthy of reasoned debate. Important, too, is the horses' more recent history, and their continuing influence upon the people who love them.



## **Wild Horses and Federal Laws**

### **H.R. 765, "Shackleford Banks Wild Horses Protection Act"**

#### **The Legislation**

On July 16, 1998, the "Shackleford Banks Wild Horses Protection Act" became federal law. This law states that the Secretary of the Interior should enter into an agreement with the Foundation for Shackleford Horses, or another non-profit, to manage the herd of horses in Cape Lookout National Seashore. The management was required to be cost-effective, to ensure the natural resources of the park were not harmed, and to allow the Foundation or other non-profit to adopt any of the horses that the Park Service removes from the park.

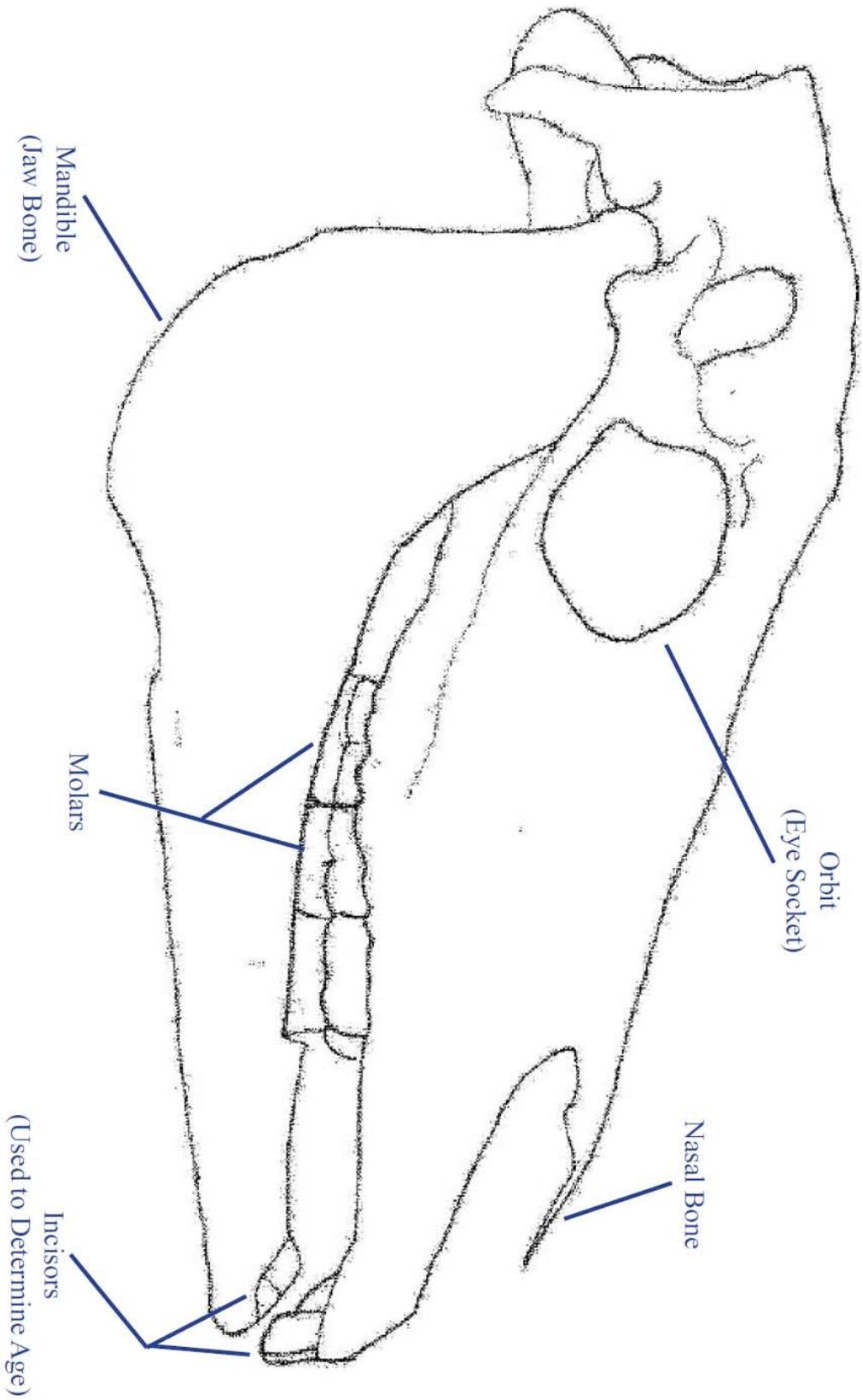
Horses are allowed to be removed only if there are more than 110 horses in the herd or in case of an emergency or for the health or safety of the public. This law also provides for a yearly assessment of the state of the herd that is to be made available to the public.

If the population numbers drop below 100 due to natural causes (like hurricanes or diseases), the park does not have to add horses to the herd. And, damage to property inside (like fishing or camping gear) or outside (if the horses get out) the park caused by the horses does not have to be paid for or replaced by the Park Service.

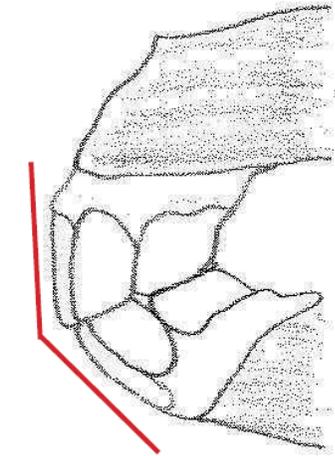
#### **What Does This Mean?**

- If there are 99 or fewer horses on the island, the park cannot give any of the horses birth control or otherwise limit the population growth.
- If there are between 100 and 110 horses, the park can limit the population growth, but cannot remove any horses from the island.
- Any horses taken off the island can be adopted by the non-profit partner (the Foundation for Shackleford Horses) of the park.
- The health of the rest of the animals and plants on the island must be considered
  - the horses cannot be allowed to strip the island of plant life or cause the local extinction (loss of a species from a particular area) of another animal or plant
- People visiting Shackleford should be aware that they are on an island with WILD animals and must be conscious not to harass the horses. The visitor is responsible for any damaged property.

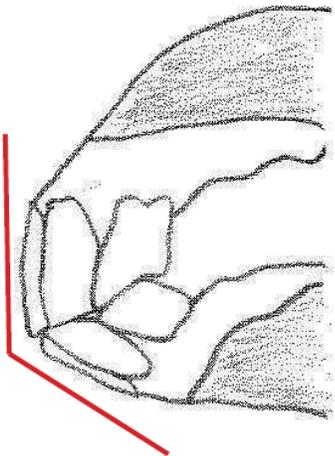
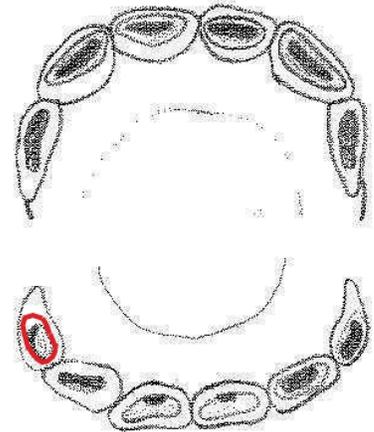
# Horse Skull Basics



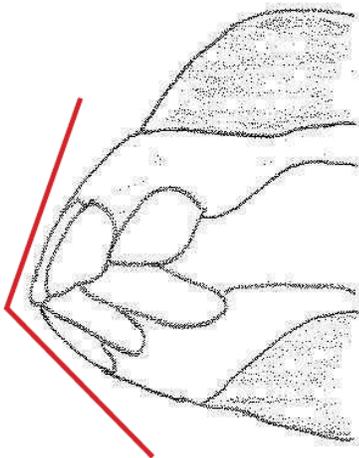
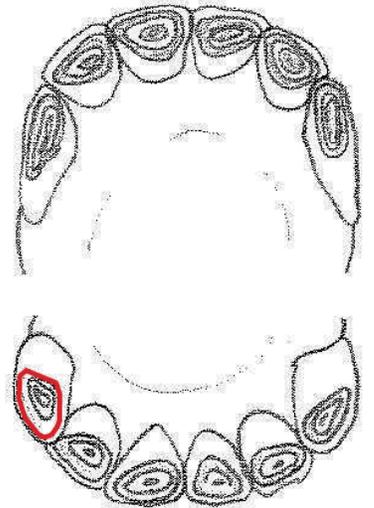
# Horse Tooth Shape and Angle



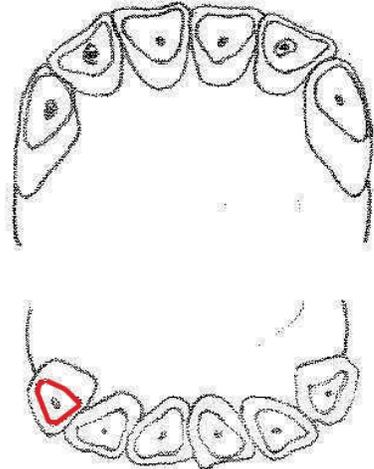
5 Years of Age



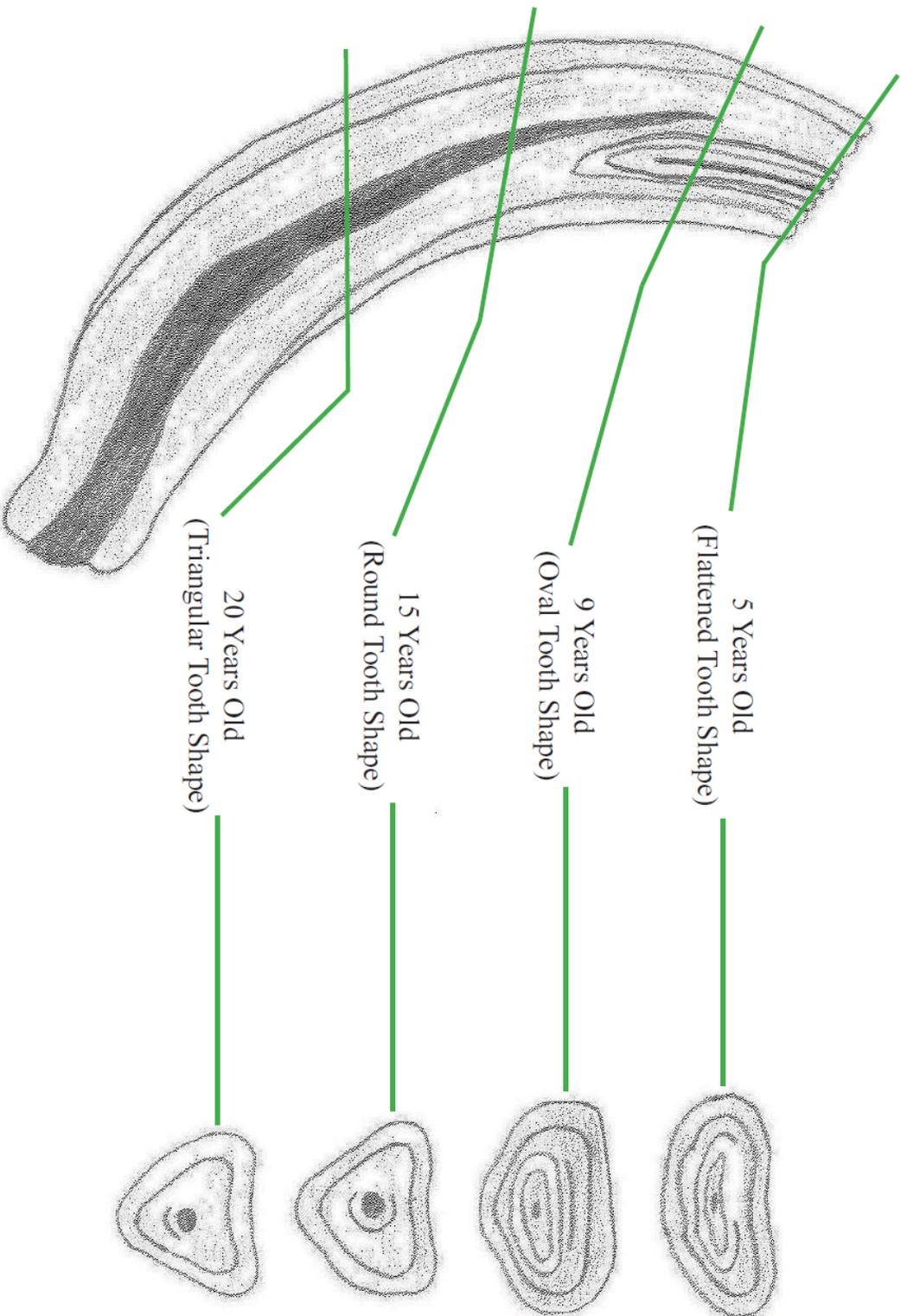
10 Years of Age



20 Years of Age



# Horse Age and Tooth Wear



Horses do not grow their teeth throughout their lives. This whole permanent tooth is already in the horse's jaw. The tooth is pushed out as the horse ages (in the same way that a person's permanent tooth is pushed up from the gums). Since the tooth is shaped differently at the bottom than at the top of the whole tooth, the part of the tooth we see changes shape as the horse ages. It is because this tooth is curved that the angle of the horse's teeth also changes as it ages (see Horse Tooth Shape and Angle).



- Whether you call them horses or ponies, officially a pony is how tall?  
**Less than 14.5 hands**                      **Less than 17 hands**                      **Less than 20 hands**
- Horses live in one of two types of social groups on the island.  
**True**    **False**
- When it gets hot in the summer, the horses like to do what to cool off?  
**Swim out to the spartina islands**                      **hang around the interior of the island**
- Horses at Shackleford Banks can drink salt water.  
**True**    **False**
- Mares usually only give birth to one foal.  
**True**    **False**
- The stallions may think they are in charge, but frequently it's the females who decide which harem to join.  
**True**    **False**
- You should keep your dog on a leash at Shackleford Banks because the dog can?  
**Scare the horses**    **chase a foal to death**  
**be killed by a horse protecting itself or foal**                      **all of these**
- Horses are used to people, so you can get as close as you want in order to take a picture  
**True**    **False**
- If a horse starts to walk away from you, it is telling you you are too close.  
**True**    **False**
- If you are charged by a horse in the high brush, you should?  
**Run as fast as you can**    **Move toward or into a bush**  
**Run at the horse**
- When you visit Shackleford Banks, remember?  
**You are the intruder in the horses' home**                      **Dog off a leash is a \$350 fine for each dog**  
**Take your trash off the island with you**                      **Do not try to touch a horse**  
**All of these**

# Horse Speak

## Post-Site Visit

### Description:

Using what they have learned about horse behavior, students will examine several images of horses and match those animals with the behavior they are displaying.

### Materials:

20 Index Cards

20 Horse picture cards

Behavior Answer Key

Student Page

**Directions:** Time involved = approximately 60 minutes

1. Print out two copies of the horse behavior cards
2. Cut out one copy of the cards to be used by the students. Keep the other copy as the answer key.
  - Make sure that the picture is not attached to the text (it gives away the answer)
3. Make two index cards for each behavior.
  - Finding/Digging for Water, Foraging for Food, Relaxing, Scratching an Itch, Protecting a Foal, Standing Guard, Stallion Checking Out a Stranger, Stallion Herding Mare, Stallions Challenging Each Other, Stallions Fighting
4. Break the class up into 2 teams. Divide each team into 2 groups.  
(These are names of actual Shackleford horses.)
  - Team Daisy is made up of
    - Group Togo (10 pictures)
    - Group Tooba (10 behavior cards)
  - Team Darcy is made up of
    - Group Sacajawea (10 pictures)
    - Group Salsa (10 behavior cards)
5. Teams should gather on opposite sides of the room.
6. Each group should receive the envelope marked with their group name.
  - Each envelope will have either be pictures of horses or descriptions of horse behaviors.
  - There will be **10 sets of 2 cards** each in each team.
7. In **five minutes**, each team should match their horse descriptions with horse pictures.
  - Use what has been learned in the previous reading and discussion days.
8. There will only be one horse card for each behavior card.
9. Work as quietly as possible to avoid letting the other team know what cards they have.
  - Pictures and descriptions should not be shared outside of the team. This is a competition!
10. When the time is up, the matches will be checked by the teacher.

11. After the matches are confirmed, teams should divide their sets (a picture and its matching description) among their team members.
12. Each team **member** will have one set to act out for the opposing team.
  - If other team members are needed to act out the behavior, find someone to help and discuss his/her role in the charade.
13. The opposing team must guess the behavior acted out.
  - For example: the behavior ‘horse on guard’ is matched with a picture of a stallion standing on top of a dune and looking into the distance.
  - The student with these cards will pretend he/she is a horse standing guard and looking into the distance. Horse noises can be made, however no human speech is allowed!
  - The opposing team must guess what behavior the student is acting.
14. Each team will start out with 10 points on the board. The teacher keeps the score.
15. The opposing team will have **2 minutes** to guess each behavior.
16. Team Daisy will be the first team to act out a behavior. Team Darcy will be the first team guessing what behavior is being acted out.
17. Each team will get 2 attempts to guess the correct behavior.
  - If they guess correctly, the team will get **2 points**.
  - If they do not get the correct answer before time is up or they get two wrong guesses, the team loses **1 point** for each incorrect guess.
18. After Team Darcy either guesses the correct behavior or time runs out, Team Daisy will have a chance to guess one of Team Darcy’s behaviors.
19. The teams will switch between guessing and acting out behaviors until they are both out of cards.
20. The team with the most points at the end wins.

**Questions:** Time involved = approx. 15 minutes

- How did you determine which behavior matched a picture?
  - Did you look at the eyes? Ears? Legs? Back? Neck?
  - How did the horses muscles affect what mood you thought the horse was in?
- What actions (movements, facial expressions) did you use to act out the behaviors?
- How did the indicators you used to identify the picture compare with the actions you used to act out the behavior?
  - Were they similar or different?
- How can you use your knowledge of horse behaviors to SAFELY approach wild horses like those on Shackleford Banks?

# Horse Speak

## Students' Page

### Description:

Using what you have learned about horse behavior, you will examine several images of horses and match those animals with the behavior they are displaying.

### Materials:

Group Envelopes

### Directions:

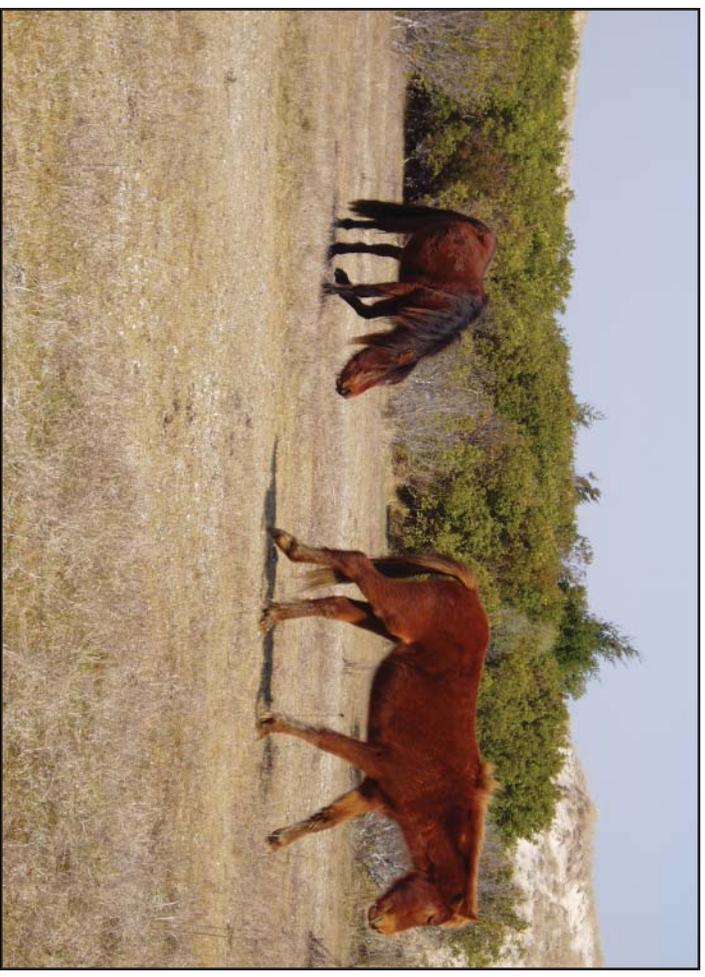
1. Split into your teams and groups.  
(These are names of actual Shackleford horses.)
  - Team Daisy is made up of
    - Group Togo (10 pictures)
    - Group Tooba (10 behavior cards)
  - Team Darcy is made up of
    - Group Sacajawea (10 pictures)
    - Group Salsa (10 behavior cards)
2. Team Daisy should gather on one side of the room and Team Darcy should move to the other.
3. Each group will receive an envelope with either pictures of horses or descriptions of horse behaviors.
  - Group Tooba and Group Togo will match their cards and pictures together.
  - Group Salsa and Group Sacajawea will match their pictures and cards together.
  - Do Not open the envelope until told to do so.
4. You will have **5 minutes** to match up your cards.
  - There is only one horse card for each behavior card.
  - Remember: work as quietly as possible so the other team doesn't hear your answers.
5. When you have finished matching your cards, check your answers with the teacher.
6. Divide up your card pairs (there will be 10 pairs) among your team members.
7. You will have 5 minutes to discuss how you can act out the behavior on your card.
  - Use other teammates when needed (you can't guard a foal without a foal).
8. Each team will start out with **10 points**. The opposing team will have **2 minutes** to guess each behavior.
9. Team Daisy will be the first team to act out a behavior. Team Darcy will be the first team to guess.
10. Each team will get 2 attempts to guess the correct behavior.
  - If they guess correctly, the team will get **2 points**.
  - If they do not get the correct answer before time is up or they get two wrong guesses, the team loses **1 point** for each incorrect guess.
11. After the first round, Team Daisy will have a chance to guess one of Team Darcy's behaviors.
12. The teams will switch between guessing and acting out behaviors until they are both out of cards.





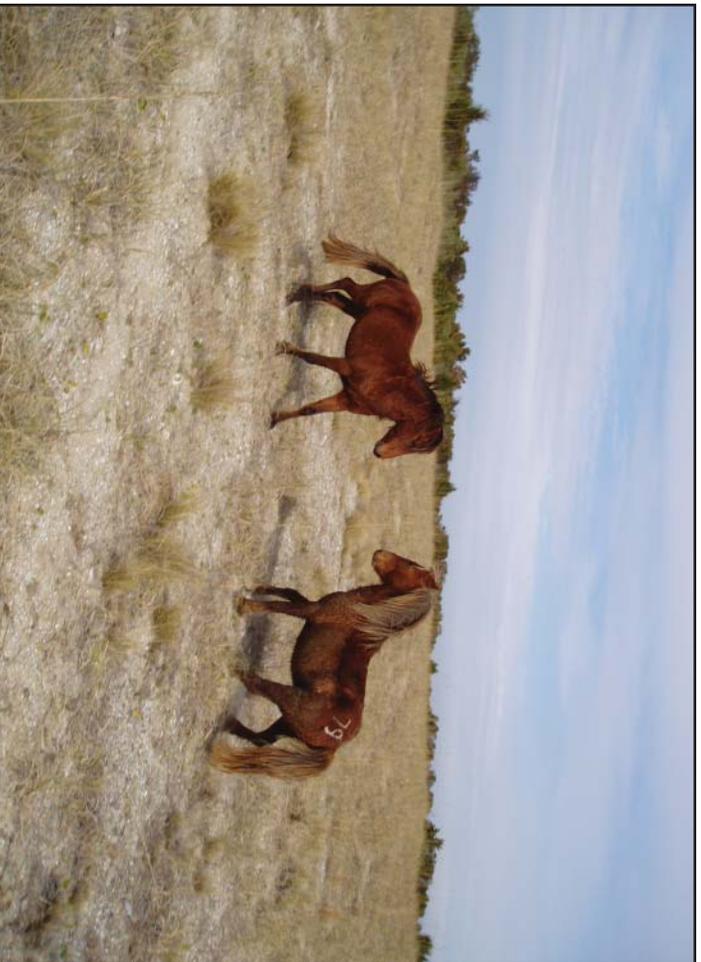
**Above:** Finding/Digging for water

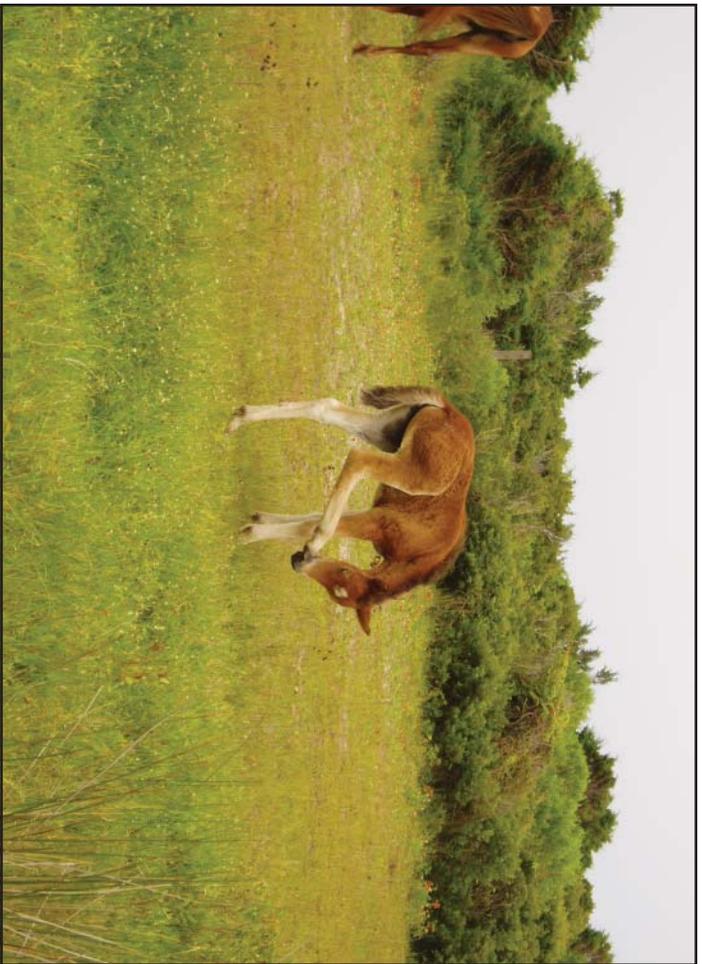
**Below:** Stallions Challenging Each Other



**Above:** Stallion Herding Mare

**Below:** Standing Guard





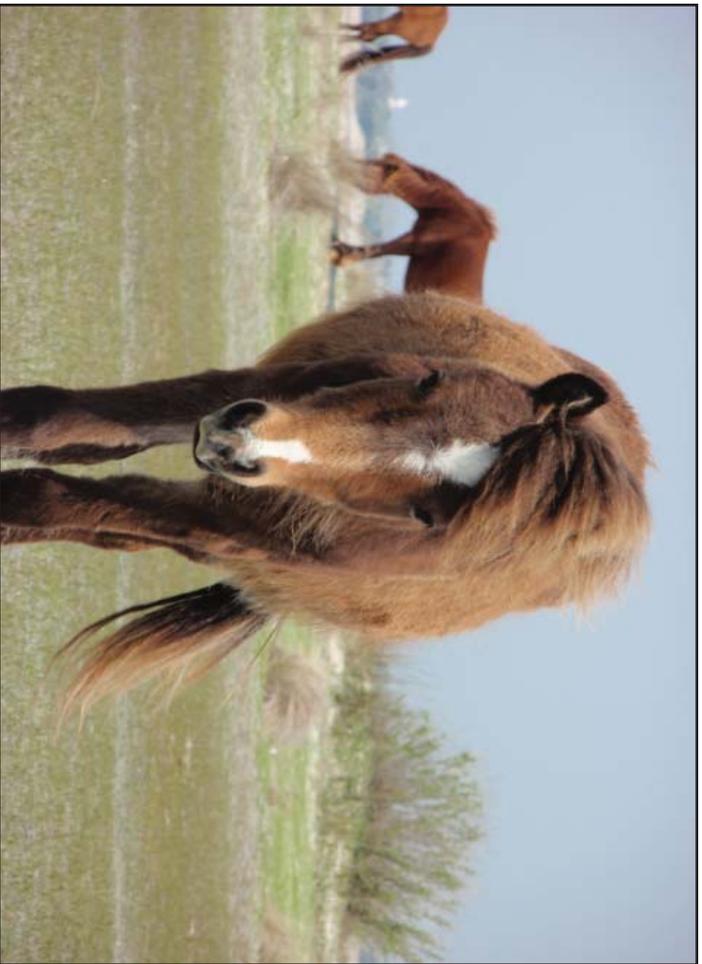
**Above:** Scratching an Itch

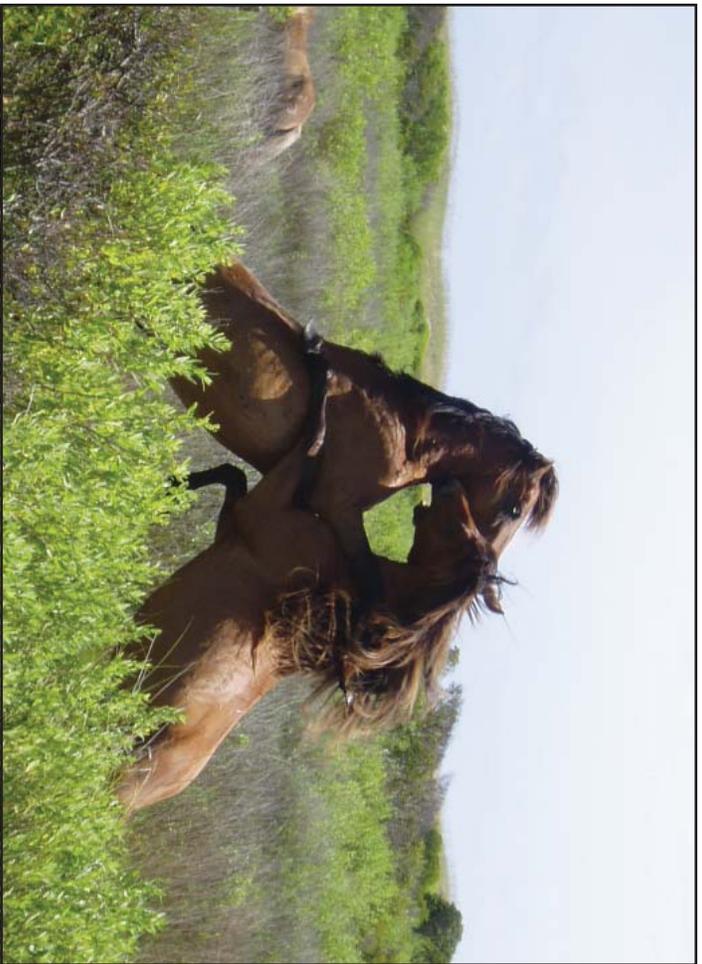
**Below:** Stallion Checking Out a Stranger



**Above:** Foraging for Food

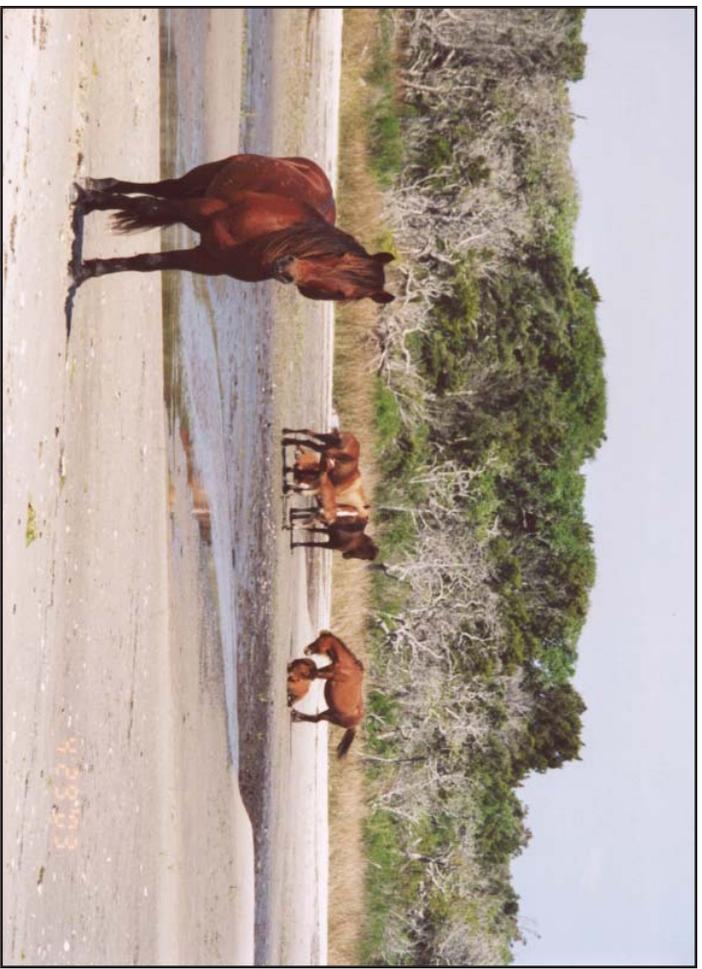
**Below:** Relaxing





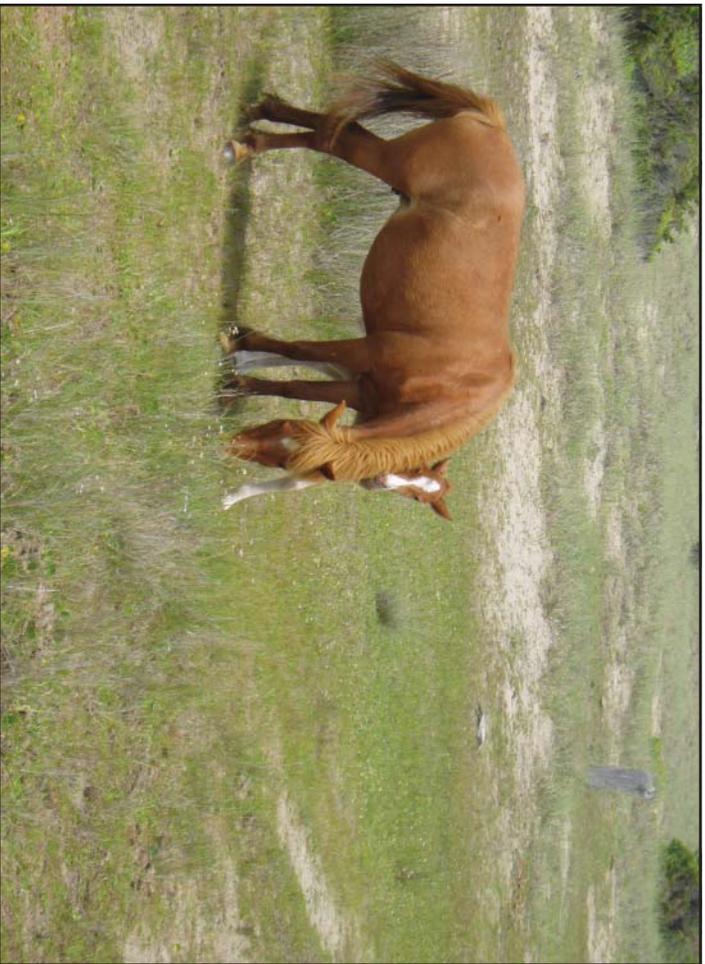
**Above:** Stallions Fighting

**Below:** Protecting a Foal



**Above:** Stallion Checking Out a Stranger

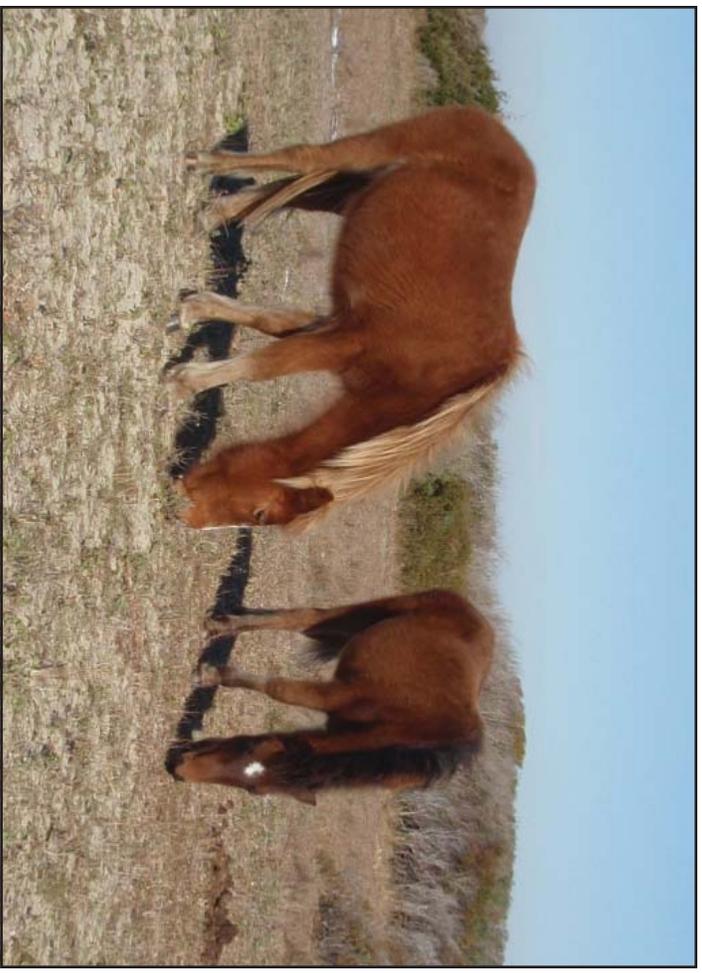
**Below:** Protecting a Foal





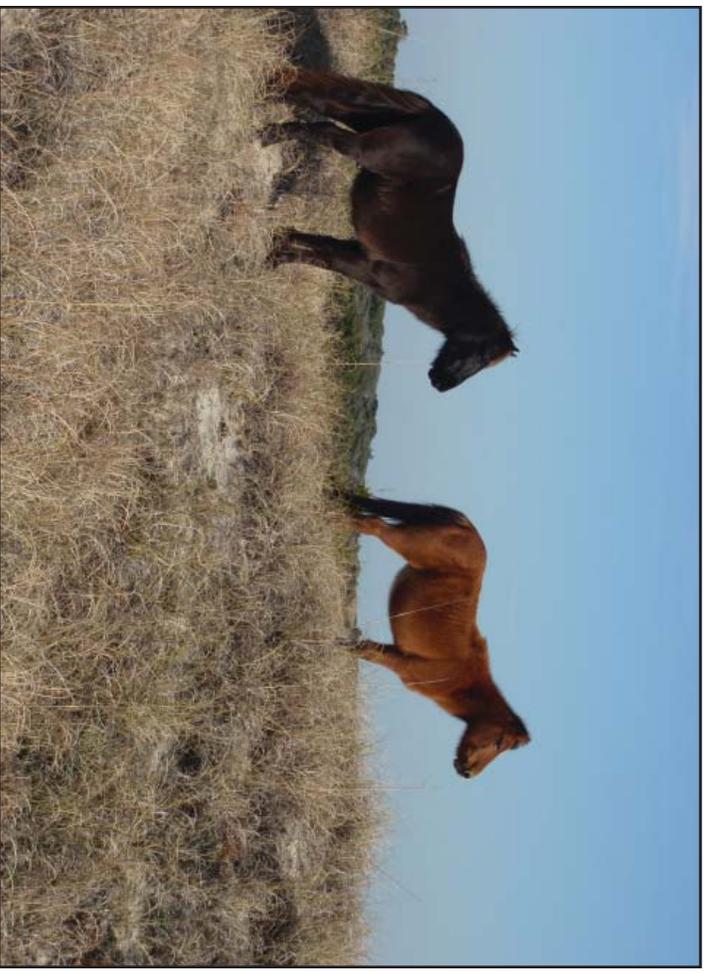
**Above:** Scratching an Itch

**Below:** Stallions Challenging Each Other



**Above:** Foraging for Food

**Below:** Standing Guard

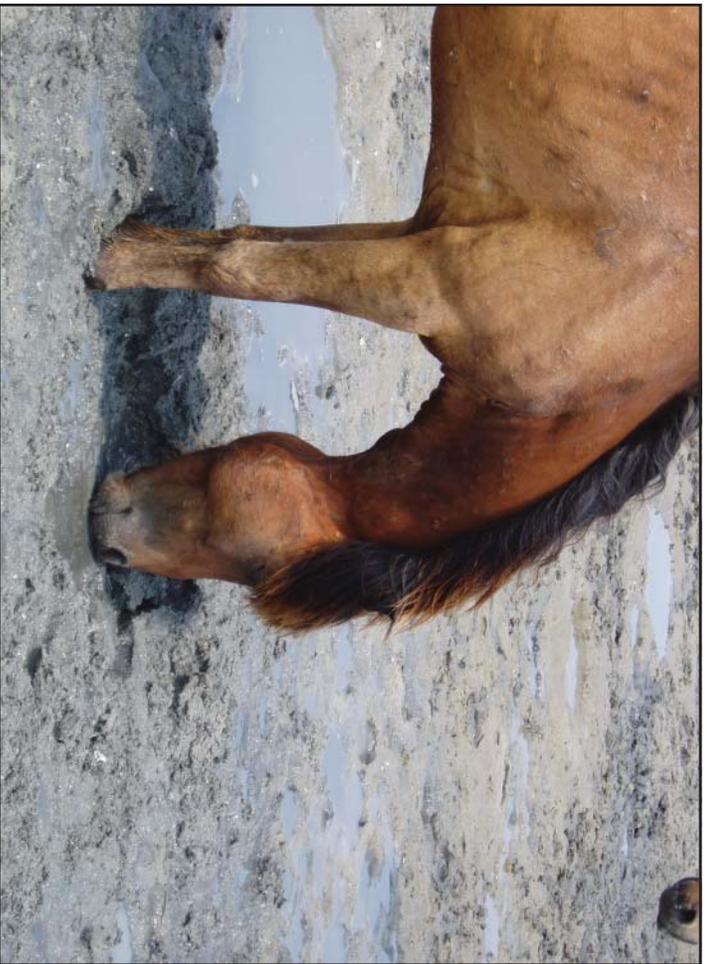




**Above:** Stallions Challenging Each Other      **Below:** Finding/Digging for Water



**Above:** Stallion Herding Mare      **Below:** Relaxing



Additional Resources:

“Horses of Shackleford Banks” from Cape Lookout N.S.

<http://www.nps.gov/cal/planyourvisit/upload/horse2004.pdf>

Park brochure for Pre-Site Activity

The Foundation for Shackleford Horses website

<http://shacklefordhorses.org/about.htm>

General information on and a detailed timeline of the herd

*The Wild Horses of Shackleford Banks* (2007)

Text by Carmine Prioli, Photographs by Scott Taylor

History of the herd and stories on specific horses

“The Wild Horses of Shackleford Banks: an Interview with Dr. Sue Stuska” by Michele King

<http://network.bestfriends.org/3448/news.aspx>

Information from Cape Lookout National Seashore’s Equine Biologist

“Equine Expressions: Understanding Your Horse’s Body Language” by Laurel Scott

[http://equisearch.com/horses\\_care/health/behavior/understanding\\_horse\\_body\\_language\\_022409](http://equisearch.com/horses_care/health/behavior/understanding_horse_body_language_022409)

Information on reading visual signals from horses

“Shackleford Banks Horses” from the Library of Congress

<http://lcweb2.loc.gov/diglib/legacies/NC/200003243.html>

Short blurb about the herd

Cape Lookout National Seashore– Horse Story