Feather Wars

Surviving Fashion 1870-1920

Teacher’s Guide
For the Special Exhibit
November 20, 2010 to June 30, 2011
Overview

“Feather Wars: Surviving Fashion 1870-1920” is a new, temporary exhibition open from November 2010-June 2011 in the Richard and Pat Johnson Palm Beach County History Museum in the restored 1916 Courthouse in downtown West Palm Beach.

“Feather Wars” will examine the extraordinary period of south Florida history in which a worldwide trend in women’s hats created a rush to riches for ordinary people, and devastation for a population of splendid birds who inhabited the tropical wilderness. For approximately forty years, the birds were pursued to near extinction, and the phenomenon inspired some of the earliest and most critical legislation in the area of environmental protection.

Plume hunting was an activity almost anyone could do if they owned a gun. The beautiful down plumage of a Snowy Egret hen nursing her chicks was highly prized and brought the same price-per-ounce as gold. Without alternative means of commerce of almost any kind, plume hunting became a lucrative activity for men, women, and children in both pioneer and Seminole communities, providing cash for everyday necessities.

As the fashion industry expanded its use of feathers, the scale of this cottage industry became monstrous, and spread globally. The impact in Palm Beach County on individuals, families, and the natural environment was not reversible.

Imagine yourself in Palm Beach County in 1880 living a subsistence lifestyle. Suddenly, it is possible to earn money using what seems to be an unlimited, free source of goods that is there for the taking. The demand for specialty plumes, with an outrageously high cash return, seemed heaven sent. And, this continued for a generation.

LEGISLATING

Henry Bergh, founder of the American Society for the Prevention of Cruelty to Animals, left banking to work at the American Museum of Natural History. He wrote numerous articles and books extolling birds in the wild and gave speeches to legislators to protect birds. Thirty-three states and territories passed laws to protect birds. Commerce of wildlife protected by state law.

Florida Legislature adopted the American Ornithologists' Union (AOU) resolution.
Teacher’s Guide to the Special Exhibit

*Feather Wars*

*Surviving Fashion 1870-1920*

**Target Grade:** 4th

**Student Target:**
- I can explain what Feathers Wars was about.
- I can name at least five birds that were hunted for their feathers.
- I can talk about the president that established the first national wildlife refuge.

**Materials:**
Pen/pencil, copies of Lesson handout, extra sheets of paper (if needed), computer with Internet access.

**Warm-up:**
Ask your students if they have ever heard of the Feather Wars. Most may never have heard of this. Explain to the class what the Feather Wars were about. How plume hunters hunted birds for their feathers to adorn women’s hats. Because of this, some bird species, such as the snowy egret, were hunted to near extinction. Explain to your class that they will soon be going to the Richard and Pat Johnson Palm Beach County History Museum to see a special exhibit about the Feather Wars.

**Lessons:**
There are several lessons for teachers to use with students for pre-visit and post-visit.

**Visit the Museum to see Feather Wars**
After the pre-visit lessons, visit the Johnson History Museum to see the special Exhibit Feather Wars: Surviving Fashion 1870-1920.

**Wrap-up**
After the museum visit, have students complete some of the post-visit activities.

**Assessment**
Once the students are finished with activities. Have them share their answers with the class.

**Strategies**
Critical Thinking Skills, Integration of Oral and Written instruction, Prior Knowledge, and Writing Strategies.

**Sunshine State Standards:**

**Enrichment**
To add to this lesson, visit the Arthur R. Marshall Loxahatchee National Wildlife Refuge in Boynton Beach. You can also read *The Adventures of Charlie Pierce: The Last Egret* by Harvey Oyer. Also see www.evergladesplan.org/education/educ_docs/teachers_guide/TeachersGuide.pdf. Use Lesson 7 Bird Adaptations.
Teacher’s Guide to the Special Exhibit

*Feather Wars*

*Surviving Fashion 1870-1920*

*For Teachers: All sections of this guide may be reproduced for your students.*

**Activities**

*Please see pages 13-44.*

**Suggested Reading**


**Websites to Visit**

Arthur R. Marshall Foundation
www.artmarshall.org

Arthur R. Marshall Loxahatchee National Wildlife Refuge
www.fws.gov/loxahatchee

Audubon Society of the Everglades
www.auduboneverglades.org

Everglade National Park
www.nps.gov/ever

Field Guide to North American Birds
http://identify.whatbird.com

Florida Audubon Chapter
fl.audubon.org

Pelican Island National Wildlife Refuge
www.fws.gov/pelicanisland

USGS South Florida Access Information
sofia.usgs.gov/education.html

Historical Society of Palm Beach County
<table>
<thead>
<tr>
<th><strong>Vocabulary</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aigrettes</strong></td>
</tr>
<tr>
<td><strong>Decimate</strong></td>
</tr>
<tr>
<td><strong>Elusive</strong></td>
</tr>
<tr>
<td><strong>Extinction</strong></td>
</tr>
<tr>
<td><strong>Fauna</strong></td>
</tr>
<tr>
<td><strong>Illegality</strong></td>
</tr>
<tr>
<td><strong>Millinery</strong></td>
</tr>
<tr>
<td><strong>Ornithologist</strong></td>
</tr>
<tr>
<td><strong>Plumage</strong></td>
</tr>
<tr>
<td><strong>Rookery</strong></td>
</tr>
<tr>
<td><strong>Skiff</strong></td>
</tr>
</tbody>
</table>
Feathers have been used as fashion accessories and status symbols since at least 1500 BCE. Fashion’s demands on birds reached an all-time high in the nineteenth century when millions of birds around the world were slaughtered for their valuable plumage. After Florida became a United States Territory in 1821, more naturalists, scientists, artists, and hardy tourists began visiting and writing articles about the glories to be found in the “new” wilderness than ever before, which, in turn, lured settlers and tourists to Florida. The difficulty of travel, the lack of accommodations, intermittent wars with the Seminoles, and the Civil War prevented all but the most intrepid to visit or settle in the southern reaches of the peninsula.

By the 1870s, South Florida bird populations were being decimated even as conservationists worked to stop the destruction of this natural resource.

**The Feather Economy**

A number of factors contributed to increased feather use during the nineteenth century:

- The rise of the middle class meant more money to spend on non-essentials.
- Proliferation of fashion and home magazines allowed advertisers to reach a larger audience than ever before.
- The growth of the fashion industry, especially ready-to-wear.
- Improved firearm design and new factories made guns cheaper and more accurate.
- As railroads spread throughout the country, it became easier to get the feathers to market.

By 1870, millinery was the fourth largest occupation for women in the United States; only domestic servants, agricultural laborers, and seamstresses ranked higher. Thirty years later millinery had fallen to fourteenth place but with 82,936 women employed in the industry, it was still a significant economic force.

**Death in the Rookeries**

The most desired plumes come from wading birds such as herons, egrets, cranes, roseate spoonbills, and flamingos. These birds have the most coveted and highly valued plumage during their mating and nesting seasons. No matter the threat, adult birds will stay with their nest, fiercely protecting their young. Hunters only had to get within firing range of the rookeries and shoot—they could not help but hit something. They then collected the scalps or aigrettes of the dead birds, leaving the immature eggs and young birds to die of starvation or death by scavengers. Every time a rookery was ravaged, two generations of wading birds perished.

“Here are some official figures of the trade from one source alone, the auctions at the London Commercial Sales Rooms during 1902. There were sold 1,608 packages of ... heron plumes. A package is said to average in weight 30 ounces. This makes a total of 48,240 ounces. As it requires about four birds to make an ounce of plumes, these sales meant 192,960 herons were killed at their nests, and from two to three times that number of young or eggs destroyed.”

Herbert Keightly Job
from *Wild Wings*, 1905
William Butler and Jessee Maulden were the first two men on Lake Worth to earn their living from plume hunting. It was one of the few ways early settlers had to make money. Butler was a collector; he was paid to hunt birds and animals in order to send samples of the local fauna to Professor Henry Ward at the University of Rochester in New York. Maulden hunted birds in order to trade the plumes for cash. Butler was selective in his hunting while Maulden cleared out entire rookeries, including Pelican Island at the north end of Lake Worth which was later named Munyon Island. Both had settled on the lake in 1872, and by the time Maulden accepted a job at the Jupiter Inlet Lighthouse in 1875, most of the wading birds were gone.

As families moved to the lake, young men and boys continued the search for plumes in order to supplement the family’s income, but they had to search further afield for the elusive winged creatures. Brothers Guy and Louis Bradley formed a partnership with Seminole Tommy Listee to collect plumes. They sold them to local traders, such as Morris Benson Lyman in Lantana, who in turn shipped them to northern markets.

In the 1880s, tourists hired the Bradley brothers and Charlie Pierce to guide them on hunting expeditions that led them as far as the southern and western edges of the state. Although the best birds were few and far between, the hunters appreciated the men’s skills and paid them well. If they did find the elusive birds, the skins and plumes could pay the expenses of a hunting trip. One such customer had a market for his prey in Paris which paid fifty cents for pelican skins, twenty-five cents for sea swallows and least terns, ten dollars for great white herons, and twenty-five dollars for flamingo skins. One hunt netted 1,397 birds from 36 different species.

Stop the Slaughter
Naturalists, scientists, artists, and tourists who had thrilled to see the thousands of plume birds in Florida were the first to push for preservation of the birds which they saw as ecologically important to human welfare. Magazines aimed at boys started printing articles about the cruelty inflicted on helpless birds and encouraged more peaceful endeavors such as building bird houses and feeding stations. Many fashion editors, including Edward W. Bok (who later built Bok Tower in Lake Wales), conservation activist and editor of the Ladies Home Journal, wrote editorials against killing birds for fashion.

Protecting the Innocent
Socially prominent and educated people spoke out against wearing plumes on religious, moral, and humanitarian grounds. Several conservationists organized to stop the feather trade, including the Audubon Society. One of the problems was that it was a lucrative business for everyone involved—the hunters, traders, shippers, middle-men, milliners, and sales people. But conservationists kept spreading the word that birds were a quickly dwindling natural resource and once they were gone they would be gone forever.

Conservation Heroes
Frank M. Chapman (1864-1945): A professional banker and amateur ornithologist, left banking to work at the American Museum of Natural History in 1888. Chapman undertook two expeditions along New York’s Miracle Mile to count the birds found on women’s hats. He counted 700 hats, 542 with birds or bird parts from 174 different birds from 40 species. Wrote numerous articles and books extolling birds in the wild and gave speeches illustrated with photographs about the horrors of feather collection. Started magazine Bird Lore in 1899 to advocate for bird protection.
George Bird Grinnell (1849-1938): Naturalist, conservationist, and Indian rights activist founded the first Audubon Society in 1886. Due to administration problems, the organization folded three years later. Editor-in-chief of *Forest and Stream*, a natural history magazine, from 1876-1911, in which he and others advocated for the end of feathered fashions and for the use of game wardens to enforce game laws. Friend to fellow conservationist Theodore Roosevelt and promoter of national parks.

Harriet Hemenway (1858-1960): After reading about the bloody slaughter in an egret rookery, started campaigning to save wild birds. Helped organize the Massachusetts Audubon Society in 1896. Several other state societies soon followed, and in 1905 she helped create the National Association of Audubon Society for the Protection of Wild Birds and Animals. The membership of the state societies was 80% women.

William Dutcher (1846-1920): Prudential Life Insurance agent, chairman of the American Ornithologist’s Union’s bird protection committee (founded 1883), and chairman of the National Audubon Society (1905), worked to stop feathered fashions and campaigned for laws to stop the feather trade. Instrumental in getting Florida to pass a law to protect birds, their nests, and eggs. Used privately donated money to hire Guy Bradley as the first game warden in the Everglades.

Feather War Battles
Most of the Feather War battles were conducted at the legislative level of government. Legislatures were pushed by Conservationists to enact laws that would protect birds and thus end the feather trade.

1886 American Ornithologist’s Union (AOU) creates Model Bird Law as a blueprint for state legislatures’ use to protect birds. Thirty-three states adopt Model Law by 1905.

1900 Lacey Act: Prohibits interstate commerce of wildlife protected by state law.

1901 Florida Legislature adopts the AOU Model Bird Law with the passage of Chapter 4957, “An Act for the Protection of Birds and Their Nests and Eggs, Prescribing a Penalty for any Violation Thereof.” Breaking the law incurred fines, but no funds were allocated to pay for enforcement of the law.

1903 President Theodore Roosevelt signs bill creating Pelican Island National Wildlife Refuge in Vero Beach, the first wildlife refuge in the United States, in a move to protect nesting brown pelicans.

1911 New York passes Audubon Plumage Bill which bans sale of plumes of all native birds and closes domestic trade of feathers.

1913 Underwood Tariff Bill bans import of wild bird plumes from other countries.

1916 Migratory Bird Act was an agreement between the U.S., Great Britain, and Canada to ensure the protection of migratory birds.
LasQng
ProtecQon
Theodore
Roosevelt
(1858‐1919): 26th President of the United States. President Roosevelt was born to an affluent New York family. His father was one of the founders of the American Museum of Natural History and early supporter of animal rights activist Henry Bergh, founder of the American Society for the Prevention of Cruelty to Animals (ASPCA). As a teenager, Theodore learned bird taxidermy from the man who assisted John James Audubon. A natural history graduate of Harvard University, Roosevelt went on to lead the regiment of soldiers known as the Rough Riders during the Spanish-American War, after which he was elected governor of New York. Two years later, in 1900, he was elected vice-president of the United States. Following the assassination of President McKinley, Roosevelt became the nation’s youngest president. During his terms in office, Roosevelt set aside over 234 million acres of the country as national forests, national parks, and wildlife refuges.

Pelican Island, the Nation’s First Wildlife Refuge
Pelican Island, located on the Indian River near Sebastian, Florida, is an historic and significant island bird rookery. There are 16 species of water birds and over 30 species of birds that use the island during the winter season, and a total of 130 species found throughout the wildlife refuge.

President Theodore Roosevelt set aside Pelican Island as a preserve and breeding ground for native birds on March 14, 1903. By the late 1800s, plume hunters and others had exterminated the egrets, herons, and spoonbills that once inhabited the island rookery. German settler Paul Kroegel decided he would protect the remaining brown pelicans and petitioned ornithologists to help him save the pelicans from hunters. At the urging of the Florida Audubon Society and the American Ornithologist’s Union, President Theodore Roosevelt moved to protect Pelican Island by declaring it a national wildlife refuge. In over a hundred years, presidents have established approximately 550 national wildlife refuges.

Killed in the Line of Duty
Guy Morrell Bradley (1870-1905) moved to Florida with his family from Illinois in 1876, settling the following year on Lake Worth. Guy often hunted with his brother Louis and friends Charlie Pierce and Tommy Listee. Their prey included plume birds. The Bradley family moved to Flamingo in 1898 when Guy’s father Edwin took a job with Flagler’s Model Land Company. When the railroad company decided to follow the chain of islands to Key West instead of jumping off from Flamingo, jobs were few and far between. William Dutcher of the Audubon Society offered the position as game warden to Guy in 1902, and he was happy to have the job that would support his growing family. Guy patrolled the Everglades and Florida Bay in a powered launch named Audubon. He posted notices about the illegality of hunting plume birds and talked to hunters along his route. He also kept track of nesting birds and sent monthly reports to Dutcher in New York. It was a dangerous job. He had to convince men with guns looking to earn a lot of money from selling plumes that it was against the law. The men he had the most trouble with were from a family he had known since his days on Lake Worth, Walter Smith and his sons Tom and Danny. The morning of July 8, 1905, Guy heard gunshots coming from Oyster Keys about two miles from his waterfront home. When he looked across the water, he recognized Smith’s schooner. His launch was not working that day so he rowed his skiff to the anchored boat where Walter Smith fired a warning shot to alert his sons who were on the island killing birds. Tom and Danny returned with some banned birds and Bradley asked for their surrender. Walter Smith refused and when Bradley asked him to lower his .38-caliber Winchester so he could board the boat, Walter shot Guy who then fell
to the bottom of his skiff. The Smiths sailed to Key West where Walter turned himself in to the sheriff. Guy’s boat drifted west where it was found the next day near East Cape Sable carrying Guy’s lifeless body. Although Walter admitted to shooting Bradley and spent five months in jail, a grand jury decided there was not enough evidence and Walter Smith walked from jail a free man.

**Times Change**
The Feather Wars basically had two components. The first was a series of federal and state laws banning the hunt for feathers and the funding supplied to enforce those laws. The second was social activism. But changes in society also played as large a role in the death of the feather trade.

- **Peer pressure**: Once people started ridiculing women who continued to wear the birds and plumes, the fashion’s popularity declined.
- **World War I**: As the war spread, women no longer had the time or money to spend on such frivolities. As the trade routes around the world came under attack, the hunters could not get their feathers to market.
- **Transportation**: The third deciding factor was the invention and spreading use of the automobile so there was no room for the usually large hats.

The Feather Wars gave rise to modern environmental awareness and conservation efforts. As the use of feathers for fashion declined, bird populations slowly increased although they still have to contend with the effects of human population growth, pesticides, and loss of wetlands.

**What Can You Do?**
Become informed about plants and wildlife in Florida. Do not purchase products that come from endangered or threatened species. Support conservation and preservation efforts in your community.
The tricolored heron was not hunted for its plumes like the other herons were.

The yellow-crowned night heron hunts during the night but can be active during the day.

When startled, the great blue heron emits a sound like a dog’s bark.

Egrets and herons fly with its neck held between its shoulders in an “S” shape.

The green heron has a long neck but it looks like it doesn’t have a neck because it holds it head close to its body.

The cattle egret is originally from Africa, it arrived in Florida in the 1940s. This egret escaped the plume hunters in south Florida.

The pink coloration of the roseate spoonbill comes from a red pigment, related to Vitamin A, found in some crustaceans that they eat.

The most prized feathers were the breeding plumes or aigrettes of the wading birds such as the snowy egret, white egret and great blue heron that developed during the breeding season. In 1903, an ounce of these aigrettes was worth twice as much as an ounce of gold. At one point, the price reached $80 an ounce of feathers. It requires 4 birds to produce one ounce of feathers.

Plume hunters learned that firing a shotgun scattered the rookery. So they began hunting with small caliber rifles. The sharp, single crack of the rifle did not startle the nesting birds. Therefore, they were sitting targets for the hunters to shoot and clean out a rookery.
This page intentionally left blank
Pre-Visit Activities
This page intentionally left blank
Explore the Birds
Great Blue Heron
Length: 39” – 52”
Wingspan: 5’10”
The great blue heron is a large, common, grayish blue heron with a yellowish bill. When in flight, the heron flies with its neck in an “S” curve, not extended out from its body. It is occasionally mistaken for the Sandhill crane. The great blue heron lives around lakes, ponds, rivers, and marshes. It can be found along coastal areas of Alaska, Canada, and south to Mexico, Central and Eastern U.S., Florida, and Gulf of Mexico. The heron consumes a variety of prey such as fish, frogs, mice, small birds and insects. The great blue heron is one of the widest ranging species of any North American heron.

Little Blue Heron
Length: 22”
Wingspan: 41”
The little blue heron is of medium size with long legs and long neck which it holds in an “S” curve while at rest and in flight. It has a long pointed blue or grayish bill with a black tip. Breeding adults have blue-gray plumage on the body and the head and neck are purplish with long blue plumes. The legs and feet are dark blue. Non-breeding adults have dark blue head and the neck plumage; and pale or yellowish legs. It lives around sub-tropical swamps and it found from the Gulf states of the U.S. through Central America and the Caribbean and some parts of South America. This heron feeds on fish, frogs, crustaceans, small rodents, and insects. The adult little blue heron is similar to the reddish egret.

Tricolored Heron
Length: 22”
Wingspan: 38”
The tricolored heron is a small sized bird with long legs and long neck which it holds in an “S” curve while at rest and in flight. Its black tipped long bill is blue-grey or yellowish. This heron’s feathers are blue-grey head, neck, back and upperwings, with a white line along the neck. The belly is white. In breeding plumage, the tricolored heron have long blue fine plumes on the head and neck and buff colored ones on the back. It is found in swampy area of the coastal areas of the Gulf of Mexico, Central America, Caribbean, and South America. It feeds on insects, fish, crustaceans, and reptiles. Also called the Louisiana Heron.
Black-crowned Night Heron
Length: 22” – 26”
Wingspan: 45” – 46”
The black-crowned night heron is a medium sized, stocky heron with a black crown and back with the rest of the body white or grey, red eyes, and short yellow legs. It has a black bill. Their habitat is fresh and salt water wetlands throughout a large part of the world. These herons hunt at night or early morning and rest during the day. They eat small fish, crustaceans, frogs, insects, small mammals and birds. The black-crowned night heron may nest in trees with other ibises and herons. Other names Quock and Indian Pullet.

Yellow-crowned Night Heron
Length: 21” – 27”
Wingspan:
The yellow-crowned night is a small heron with a white crown and back. The rest of the body is grayish, red eyes and short yellow legs. There is a white stripe below the eye. Bill is heavy and black. The yellow-crowned night heron is similar to the black-crowned night heron and is found throughout a greater portion of the Americas in warmer coastal regions in salt marshes, wet prairies and marshes. They mainly hunt at night or early morning. These herons eat small fish, insects, frogs, crustaceans, and mollusks. Other names for this bird are Crab-eater, Crabier, Grosbec, Gauldin, Arsenickier, Quock, Indian Pullet, and Skwok.

Green Heron
Length: 17”
Wingspan:
The green heron is a small heron with gray-green upper body. The head, neck, and upper breast are chestnut-brown, belly is a lighter brown. Head has green-black cap with small crest. Throat is white and neck has white central stripe. Bill is two-toned with dark upper mandible and yellow lower mandible. It holds its neck back with in flight in an “S” curve. At rest, it holds it neck in. When the neck is extended, it is very long. It is found near shorelines along rivers, oceans, lakes, and ponds from the southern U.S. to Central and South America and the Caribbean. The green heron feeds on small fish frogs, aquatic arthropods, insects, and mice. These herons have learned to drop bait such as insects into water to attract minnows. Other names are Green-backed heron, Skeow, Shietpoke, Little green heron.
Cattle Egret
Length: 20”
Wingspan: 34” – 37”
The Cattle egret is a small, stocky, white egret with light brown or tan colored feathers on the crown, breast, and back during the breeding season. Legs are yellow or orange in adults. Its bill is short and a yellow or orange color. The cattle egret lives along side of livestock in open fields and pastures but breeds near water with other egrets. This bird can be found along the U.S. west coast to the Great Lakes region and south to the Gulf of Mexico, Florida, and Africa. The cattle egret is originally from Africa and was first reported in South America in the late 19th century. The bird spread to the West Indies and Florida and northward. Can be found with livestock feeding on insects and is often perched on the back of cattle. The cattle egret’s main diet is insects and rarely consumes fish but will eat a frog once in a while.

Great Egret
Length: 35” – 41”
Wingspan: 4’7”
The great egret is a large wading bird with long legs and long neck with a yellow bill, black legs and feet. It has all white feathers and like the great blue heron, flies with its neck in an “S” curve. During breeding season the great egret grows long lacy plumes on its back. It can be found around fresh and salt water marshes, marshy ponds, and tidal flats in the western and eastern U.S. coasts, Gulf of Mexico, and inland regions of the U.S. The great egret is also know by American egret, Common egret, Large egret, White egret, Great White Egret, and Great White Heron. The official name is Great Egret. It eats fish, frogs, snakes, crayfish, and other creatures.

Reddish Egret
Length: 25”
Wingspan: 46”
The reddish egret is a medium size wading bird with a blue-gray body and a reddish, shaggy head, neck and chest. The bill is pink with a black tip and the long legs are a blue-gray color. Like other egrets and herons, while at rest and in flight, the egret holds its neck in an “S” curve. This bird is found is southern Florida, along the Gulf of Mexico coastline, Mexico, and the Caribbean. It lives around marshes, shallow bays, and lagoons. The reddish egret feeds on fish, frogs, and crustaceans.
Snowy Egret
Length: 20” – 27”
Wingspan: 3’2”

The snowy egret is a small white egret with a slender black bill, black legs, and yellow feet. During the breeding season, it has long lacy plumes on its head, neck, and back. The bird lives along marshes, ponds, swamps, and mudflats. It can be found in the western and eastern U.S., West Indies, and South America. The snowy egret is an agile hunter feeding on minnows, shrimp, and other creatures. During the late 19th and early 20th centuries, the snowy egret was hunted almost to extinction for its beautiful white plumage during the breeding season.

Roseate Spoonbill
Length: 31”
Wingspan: 47” – 51”

The roseate spoonbill is a large type ibis with a pink body, white upper back, neck. It has a long, gray, spatulate bill. Its head is bare and olive-green. The spoonbill feeds while wading in shallow water, sweeping its bill back and forth. The bill has sensitive nerve endings that snaps the bill shut when prey is found. The spoonbill lives along mangroves, saltwater lagoons, and large, shallow lakes. It is found on the coasts of Texas, Louisiana, southern Florida, and Central America and the Caribbean. In the early 1800s, spoonbills were hunted for their pink wings which were made into fans. In later years, spoonbills were hunted for their plumes for women’s hats. The pink color of their feathers is a result of eating crustaceans that have fed on algae. Unlike herons and egrets, spoonbills fly with their necks extended. They feed on crustaceans, water beetles and bugs, frogs, and small fish.

Brown Pelican
Length: 42” – 52”
Wingspan: 6’ – 8’

The brown pelican is a large seabird with a gray-brown body, dark brown, light yellow head and neck, and an oversized bill. The legs are black with webbed feet. This bird feeds on fish by plunge diving and scooping them up with pouch. It can be found around sandy coastal areas lagoons, waterfronts, and rocky cliffs. It ranges from U.S. coastal areas north to Nova Scotia, south to South America and the Caribbean. The brown pelican eats fish, amphibians, and crustaceans. Its pouch can hold up to three gallons of water and fish.
Least Bittern
Length: 11” – 14”
Wingspan: 16” – 18”
The least bittern is a well-camouflaged small heron that is one of the most difficult to spot in the marsh. The top of the bird’s head and back are black with a white throat and belly. The wings have brown patches visible in flight. The bill, legs and feet are yellow. The least bittern eats fish, insects, small amphibians, crustaceans, and invertebrates. It is found is marshlands and ranges from the eastern U.S., Pacific coast, and southern U.S. to South America.

Limpkin
Length: 26”
Wingspan: 40”
The limpkin is a large marsh bird that resembles an ibis. The bird has a dark brown body with white streaks on the neck, back, wings, and breast. The bill is slightly down-curved. It has a long neck and long legs. The limpkin eats freshwater snails, mussels, frogs, crustaceans, and insects. This bird can be found living in wooded areas, swamps, and marshes in Georgia and Florida. Its wail or scream is very loud and has been used for jungle sound effects in Tarzan films and the screech of the mythical creature hippogriff in Harry Potter and the Prisoner of Azkaban.

Wood Stork
Length: 33” – 45”
Wingspan: 59” – 68”
The wood stork is a large, bald-headed, mostly white wading bird with black flight feathers. The stork’s bill is thick, long, and down-curved. It is the only stork that breeds in the U.S. It can be found in the southeastern U.S., coastal areas of the Gulf of Mexico, and Central and South America. It lives around marshes, swamps, and mangroves. It eats fish, frogs, and large insects.
Glossy Ibis
Length: 20”
Wingspan: 36”
The glossy ibis has a long down curved gray bill, dark purple to black feathers on the head, neck back, and belly. Its wings and tail are green. The legs are long and grayish in color and it has a white line around the face. During the breeding the bird’s colors change to a rusty-red with a blue line around its face. It lives around marshes, mudflats, lagoons, swampy forests. The ibis is found along coastal areas of North Carolina to Florida and the states along the coast of Gulf of Mexico. The bird is in colonies and gathers at dusk in large rookery areas. The ibis eats crabs, crayfish, insects, reptiles, and other creatures.

White Ibis
Length: 23” – 27”
Wingspan: 3’2”
The white ibis is a small white bird with black wing tips normally visible during flight, bare face with a down curved bill that is red. Its gray colored legs turn red during the breeding season. It lives around marshes, mudflats, lagoons, swampy forests. The ibis is found along coastal areas of North Carolina to Florida and the states along the coast of Gulf of Mexico. The bird is in colonies and gathers at dusk in large rookery areas. The ibis eats crabs, crayfish, insects, reptiles, and other creatures.

Flamingo
Length: 20”
Wingspan: 36”
The flamingo is a large long-legged pink wading bird. They always seem to stand on one leg, the other tucked beneath the body. Flamingos may stamp their webbed feet in the mud to stir up food from the bottom. Flamingos filter-feed brine shrimp and blue-green algae. Their odd-looking beak is adapted to sift the mud for the food they eat. The pink or red color of the flamingos comes from the carotenoid proteins of the food that they consume. There are six types of flamingos. They are found throughout the world. The flamingo that lives in south Florida and the Caribbean are known as the Caribbean flamingo; its other names are American, Cuban, rosy, or West Indian flamingo.
This page intentionally left blank
Who am I?
Wading Birds of the Everglades

Formed about 10,000 years ago as the ice melted at the end of the last Ice Age, The Everglades is home to a wide variety of organisms. The vast wetlands cover over 1.5 million square miles in south Florida. There are over 1,000 species of plants, over 40 species of mammals, over 350 species of birds, over 50 species of reptiles and several types of venomous snakes.

There are at least 16 species of wading birds that live in the Everglades. They are the White Ibis, the most common wading bird; Wood Stork, an endangered species; Green Heron; Great White Heron; Great Blue Heron; Great Egret; Snowy Egret; Tri-colored Heron; Little Blue Heron; Cattle Egret; Reddish Egret; Black-crowned Night Heron; Yellow-crowned Night Heron; Least Bittern; Glossy Ibis; and Roseate Spoonbill.

Identify each wading bird of The Everglades that is described here. Use the pictures on the following page to help you answer the questions.

1. I am small, all white with a slender black bill, black legs, and yellow feet. I eat minnows and shrimp. Who am I? __________________________

2. I am all white and greater than my cousin above. My slender bill is yellow and I have black legs and feet. I usually hunt alone for fish, frogs, snakes, and crayfish. Who am I? __________________________

3. The color of my feathers are a grayish-blue, I am tall and slender with a pale or yellowish bill. I live around lakes, ponds, rivers, and marshes and eat fish, frogs, mice, small birds, and insects. Who am I? __________________________

4. My colors are white with pink wings, orange tail, and crimson-colored shoulders. You cannot mistake me for any other wading bird. Look at my bill, it is long and straight with a broad spatulate tip. I get my name from the shape of my bill. Who am I? __________________________

5. Like the egrets, my feathers are all white but I have black wing tips, only seen when I fly. My bill is orange and down-curved. I like to eat crawfish and other creatures. I am also the mascot of what university in south Florida. Who am I? __________________________ Name of university ____________

Feather Wars: Surviving Fashion 1870-1920
Answers

Who am I?

Wading Birds of the Everglades

Identify each wading bird of The Everglades that are described here. Use the pictures on the following page to help you answer the questions.

1. I am small, all white with a slender black bill, black legs, and yellow feet. I eat minnows and shrimp. Who am I?  **Snowy Egret**

2. I am all white and greater than my cousin above. My slender bill is yellow and I have black legs and feet. I usually hunt alone for fish, frogs, snakes, and crayfish. Who am I?  **Great Egret**

3. The color of my feathers are a grayish-blue, I am tall and slender with a pale or yellowish bill. I live around lakes, ponds, rivers, and marshes and eat fish, frogs, mice, small birds, and insects. Who am I?  **Great Blue Heron**

4. My colors are mostly pink. You cannot mistake me for any other wading bird. Look at my bill, it is long and straight with a broad spatulate tip. I get my name from the shape of my bill. Who am I?  **Roseate Spoonbill**

5. Like the egrets, my feathers are all white but I have black wing tips, only seen when I fly. My bill is orange and down-curved. I am also the mascot of what university in south Florida. Who am I?  **White Ibis**  Name of university  **University of Miami**
Plumes = Cash

Imagine that your family were some of the first pioneers to settle on Lake Worth in the 1870s. Your family has little money. What would you do to earn much needed cash to purchase supplies you need to survive? Think about this while you read the following about what some early pioneers did. One easy way to earn cash was to hunt a select group of birds for their feathers.

William Butler and Jessee Maulden were the first two men on Lake Worth to earn their living from plume hunting. It was one of the few ways early settlers had to make money. Butler was a collector; he was paid to hunt birds and animals in order to send samples of the local fauna to Professor Henry Ward at the University of Rochester in New York. Maulden hunted birds in order to trade the plumes for cash. Butler was selective in his hunting while Maulden cleared out entire rookeries, including Pelican Island at the north end of Lake Worth which was later named Munyon Island. Both had settled on the lake in 1872, and by the time Maulden accepted a job at the Jupiter Inlet Lighthouse in 1875, the wading bird population around the lake was all but gone.

As families moved to the lake, young men and boys continued the search for plumes in order to supplement the family’s income but they had to search further afield for the elusive winged creatures. Brothers Guy and Louis Bradley formed a partnership with Seminole Tommy Listee to collect plumes. They sold them to local traders, such as Morris Benson Lyman in Lantana, who in turn shipped them to northern markets.

In the 1880s, tourists hired the Bradley Brothers and Charlie Pierce to guide them on hunting expeditions that lead them as far as the southern and western edges of the state. Although the best birds were few and far between, the hunters appreciated the men’s skills and paid them well. If they did find the elusive birds, the skins and plumes could pay the expenses of a hunting trip. One such customer had a market for his prey in Paris which paid fifty cents for pelican skins, twenty-five cents for sea swallows and least terns, ten dollars for great white herons and twenty-five dollars for flamingo skins. The hunt netted 1,397 birds from 36 different species.

Use the payment chart below to answer the following questions.

| .25 sea swallow | 10.00 great white heron |
| .25 least tern  | 25.00 flamingo skin     |
| .50 pelican skin|                            |

--You went hunting for plume birds and came back with 10 sea swallow skins, 2 least tern skins, 25 pelican skins, 5 great white herons, and 7 flamingo skins. How much money did you make?

--Now that you received your pay, you still have to pay for your hunting trip, which cost you $136.75. How much do you have left after paying for the trip?
President Roosevelt and Pelican Island

Theodore Roosevelt (1858 – 1919), 26th President of the United States. Theodore was born to an affluent Manhattan, New York family. His father was one of the founders of New York’s American Museum of Natural History who was an early supporter of animal rights activist, Henry Bergh—founder of the A.S.P.C.A. As a teenager, he learned bird taxidermy from the man who assisted John James Audubon. A natural history graduate of Harvard University, Roosevelt went on to lead a regiment of soldiers known as the *Rough Riders* during the Spanish-American War after which he elected Governor of New York. Two years later, in 1900, he was elected Vice-President. Following the assassination of President McKinley, Roosevelt became the nation’s youngest President. As President he set aside over 234 million acres of the country as national forests, national parks, and wildlife refuges. The first of these wildlife refuges was Pelican Island, located in the Indian River near Sebastian, Florida.

In the late 19th century, the bird population was declining because plume hunters were killing off the plume birds for the fashion industry. The brown pelicans were some of the birds to survive. But these birds, too, were in danger of being killed off. German immigrant Paul Kroegel took it upon himself to protect the birds that lived on Pelican Island, named for the pelicans that lived there, from plume hunters. Kroegel was by himself at that time because there were no laws to protect the birds.

A few naturalists visited Kroegel at Pelican Island. One of them was Frank Chapman from the American Museum of Natural History in New York. Chapman found out that Pelican Island was one of the last brown pelican rookeries along Florida’s east coast. The Florida Audubon Society and the American Ornithologists’ Union joined to try to save Pelican Island. In 1901, the organizations led a campaign for legislation to protect non-game birds. The Florida Audubon hired Kroegel to protect the birds of Pelican Island from hunters.

In the mean time, Frank Chapman and his associate William Dutcher met with President Roosevelt to seek his help to protect Pelican Island. Their meeting with the president resulted in an executive order to save the brown pelicans. On March 14, 1903, President Roosevelt established Pelican Island as a national wildlife refuge, the first in the United States.
President Roosevelt and Pelican Island

Read President Roosevelt and Pelican Island then answer the following questions.

1. How did Theodore Roosevelt become President?

2. President Roosevelt set aside how many acres of land as national forests, national parks, and wildlife refuges?

3. Who protected Pelican Island and the brown pelicans that lived there?

4. What two organizations led a campaign for legislation to protect non-game birds?

5. When did President Roosevelt declare Pelican Island a national wildlife refuge?
Answers
President Roosevelt and Pelican Island

Read President Roosevelt and Pelican Island then answer the following questions.

1. How did Theodore Roosevelt become President? **Roosevelt was Vice-President when President McKinley was assassinated, Roosevelt became President.**

2. President Roosevelt set aside how many acres of land as national forests, national parks, and wildlife refuges? **234 million acres**

3. Who protected Pelican Island and the brown pelicans that lived there? **Paul Kroegel.**

4. What two organizations led a campaign for legislation to protect non-game birds? **The Florida Audubon Society and the American Ornithologists’ Union.**

5. When did President Roosevelt declare Pelican Island a national wildlife refuge? **March 14, 1903.**
Guy Morrell Bradley (1870-1905) moved to Florida with his family from Illinois in 1876, settling the following year on Lake Worth. Guy often hunted with his brother Louis and friends Charlie Pierce and Tommy Listee. Their prey included plume birds. The Bradley family moved to Flamingo in 1898 when Guy’s father Edwin took a job with Flagler’s Model Land Company. When the railroad company decided to follow the chain of islands to Key West instead of jumping off from Flamingo, jobs were few and far between. William Dutcher of the Audubon Society offered the position as game warden to Guy in 1902. Guy was happy to have the job that would support his growing family. Warden Bradley patrolled the Everglades and Florida Bay in a powered launch named Audubon. He posted notices about the illegality of hunting plume birds and talked to hunters along his route. He also kept track of nesting birds and sent monthly reports to Dutcher in New York. It was a dangerous job. He had to convince men with guns looking to earn a lot of money from selling plumes that it was against the law. The men he had the most trouble with were from a family he had known since his days on Lake Worth, Walter Smith and his sons Tom and Danny. The morning of July 8, 1905, Guy heard gunshots coming from Oyster Keys about two miles from his waterfront home. When he looked across the water, he recognized Smith’s schooner. His launch was not working that day so he rowed his skiff to the anchored boat. Walter Smith fired a warning shot to alert his sons who were on the island killing birds. Tom and Danny returned with some banned birds and Bradley asked for their surrender. Walter Smith refused and when Bradley asked him to lower his .38-caliber Winchester so he could board the boat, Walter shot Guy who then fell to the bottom of his skiff. The Smiths sailed to Key West where Walter turned himself in to the sheriff. Guy’s boat drifted west where it was found the next day near East Cape Sable carrying Guy’s lifeless body. Although Walter admitted to shooting Bradley and spent five months in jail, a grand jury decided there was not enough evidence and Walter Smith walked from jail a free man.
The Hero Warden
Guy Bradley

Answer the following questions after reading “The Hero Warden: Guy Bradley.”

1. Where was Guy Bradley from?

2. Who did Guy go hunting with?

3. Why did Guy’s family move to Flamingo?

4. What kind of job did Guy take in 1902?

5. As a warden, what did Guy have to do?

6. What happened on July 8, 1905?

7. After Walter Smith turned himself in, what happened to him and why?
Answers

The Hero Warden
Guy Bradley

1. Where was Guy Bradley from? **Illinois**

2. Who did Guy go hunting with? **He hunted with his brother Louis and friends Charlie Pierce and Tommy Listee.**

3. Why did Guy’s family move to Flamingo? **The Bradley family moved to Flamingo in 1898 when Guy’s father Edwin took a job with Flagler’s Model Land Company.**

4. What kind of job did Guy take in 1902? **Game warden**

5. As a warden, what did Guy have to do? **Guy patrolled the Everglades and Florida Bay. He posted notices about the illegality of hunting plume birds and talked to hunters along his route. He also kept track of nesting birds and sent monthly reports to Dutcher in New York. He had to convince men with guns looking to earn a lot of money from selling plumes that it was against the law.**

6. What happened on July 8, 1905? **He confronted Walter Smith and his sons who had illegal birds they had just shot. Smith shot and killed Guy when he tried to arrest the Smiths.**

7. After Walter Smith turned himself in, what happened to him and why? **Although Walter admitted to shooting Bradley and spent five months in jail, a grand jury decided there was not enough evidence and Walter Smith walked from jail a free man.**
Language Skills

Can you make at least 15 words out of Snowy Egret?

Can you make at least 30 words out of Great Blue Heron?
Answer Key

Language Skills

Can you make at least 15 words out of Snowy Egret?

Egret  Grey  Not  Snowy Ton  Toy  Yore
Gee  Grow  Now  So  Tone  Tree  Yes
Get  Net  One  Sow  Tony  West  Yet
Go  New  Rent  Stowe  Tor  Won
Green  No  Row  Tee  Torn  Worn
Greet  Nor  Snow  Ten  Tow  Wrote

Can you make at least 30 word out of Great Blue l

At  Bore  Gel  Heat  Lube  Ore  Tear
Bale  Born  Get  Hen  Neal  Ran  Tee
Bare  Burn  Glee  Her  Near  Rat  Thor
Bat  Burr  Glue  Here  Neat  Real  Ton
Bear  Eager  Go  Heron  Net  Reel  Tone
Beat  Eagle  Gore  Hew  No  Rent  Toner
Bee  Ear  Great  Horn  Nor  Rhea  True
Beet  Eat  Green  Hot  Nora  Ron  Tube
Ben  Era  Hat  Hue  Not  Rot
Blue  Ergo  He  Leon  On  Tale
Blur  Gear  Heal  Loan  One  Tea
Boar  Gee  Hear  Lone  Or  Teal
Be the Detective

Can you find and identify these items in the exhibit?

What is this?

What is this?

What is this?
Post-Visit Activities
Write a Poem

In this writing exercise, you will write a poem about your favorite wading bird.

First, read the poem “The Snowy Heron” by May Riley Smith (1842-1927).

The Snowy Egret
“What does it cost this garniture of death? It costs the life which God alone can give; It costs dull silence where was music’s breath, It costs dead joy, that foolish pride may live. Ah, life, and joy, and song, depend upon it, Are costly trimmings for a woman’s Bonnet!” ---May Riley Smith

Now, think about your favorite wading bird and write a poem about it.
Plumes = Cash

Plume hunters could make a lot of money from bird feathers and skins. White hunters selling their bundles of plume and skins received cash from traders. Seminole Indians also participated in the plume trade. When they came to trading stores to sell plumes, Seminole hunters usually wanted silver and gold coins to purchase items they needed one at a time. Very seldom did they buy items on account. One plume hunter living along Florida’s southwest coast, Cuthbert, went on two plume hunts and cleaned out a rookery that now bears his name. The money he made was enough to purchase half of Marco Island, near Naples, Florida, to start a farm. After he settled down, Cuthbert never went plume hunting again.

Think and Discuss in Class
During the late 19th century, most people did not see plume hunters and traders as bad people. Most individuals had little knowledge of environmental awareness. Hunters were just trying to earn cash so they could buy what they needed for their families.

--Is it right to judge the people of the past using our laws, moral values, and environmental awareness of today, for hunting some species of birds to near-extinction?

Discuss this in class. There is no right or wrong answer.
Cuthbert Rookery
Florida’s Last Rookery

Cuthbert Rookery was probably the last rookery in Florida where nesting birds that were once common throughout Florida gathered in great numbers. Rookeries of ibises, cormorants, little blue and tricolored herons and of other non-plume-bearing birds may still be found at Cuthbert with roseate spoonbills, great egrets and snowy egrets. The rookery is located at the far end of southern Florida in a “Great Mangrove Swamp” bordering the Everglades about 12 miles east of Flamingo.

Every plume hunter in south Florida knows of Cuthbert Rookery. Even though the rookery is isolated and difficult to get to, it has been repeatedly attacked and “shot out” by hunters when there are enough birds to make it worthwhile for the hunter. Because if the island’s isolation, it was a refuge for birds seeking escape the plume hunters. When Frank Chapman made his visit, he believed that the last snowy egrets and roseate spoonbills would be shot at Cuthbert.

Chapman made four attempts to reach Cuthbert before he made it. In May 1904, on his way to the rookery, he met Warden Guy Bradley near Tavenier Creek in the Keys. Bradley told Chapman that the rookery had been “shot out.” Bradley had been keeping hunters away from Cuthbert, which had helped the bird population there increase. But while Bradley had been away, hunters crept in and shot out the rookery. It was too tempting for the hunters to pass up. Aigrettes were selling for $32.00 an ounce. The hunters took about 500 birds. Chapman did not make it to the rookery.

Chapman tried once again the following year but his equipment was destroyed by fire. It was that same summer that Bradley was killed on duty. Chapman did not make another attempt to reach the rookery until 1907 but that one failed too. In 1908, Chapman once again tried to get to Cuthbert Rookery. This time, he succeeded without any troubles. His special objective was to study roseate spoonbills and the rookery. When Chapman reached the rookery, he found about 40 of these rare birds. There were also a dozen snowy egrets, 400 great egrets and about 2,000 tricolored herons, 50 little blue herons, a few hundred white ibises, a couple if cormorants. Once there, Chapman and his group studied the rookery, took photographs, and made sketches. These would be used to create a Cuthbert Rookery diorama for the American Museum of Natural History.
Cuthbert Rookery
Florida’s Last Rookery

Read Cuthbert Rookery and answer the following questions.

1. Where is Cuthbert Rookery located? ______________________________________
   ______________________________________________________________________
   ______________________________________________________________________

2. When Frank Chapman made his visit to Cuthbert Rookery, what did he believe?
   ______________________________________________________________________
   ______________________________________________________________________

3. How many attempts did Frank Chapman make to get to Cuthbert Rookery?
   ______________________________________________________________________

4. When Chapman met with Guy Bradley, what did Bradley tell Chapman?
   ______________________________________________________________________
   ______________________________________________________________________

5. How much were aigrettes selling for per ounce? ____________________________

6. What was Chapman’s special purpose? ______________________________________
   ______________________________________________________________________
   ______________________________________________________________________

7. List the birds that Chapman found when he made it to Cuthbert Rookery.
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
Answers

Cuthbert Rookery
Florida’s Last Rookery

Read Cuthbert Rookery and answer the following questions.

1. Where is Cuthbert Rookery located?  The rookery is located at the far end of southern Florida in a “Great Mangrove Swamp” bordering the Everglades about 12 miles east of Flamingo.

2. When Frank Chapman made his visit to Cuthbert Rookery, what did he believe?  He believed that the last snowy egrets and roseate spoonbills would be shot at Cuthbert.

3. How many attempts did Frank Chapman make to get to Cuthbert Rookery?  Chapman tried four times to get to Cuthbert Rookery.

4. When Chapman met with Guy Bradley, what did Bradley tell Chapman?  Bradley told Chapman that the rookery had been “shot out.”

5. How much were aigrettes selling for per ounce?  $32.00 an ounce.

6. What was Chapman’s special purpose?  His special objective was to study roseate spoonbills and the rookery.

7. List the birds that Chapman found when he made it to Cuthbert Rookery.  Roseate spoonbills, snowy egrets, great egrets, tricolored herons, little blue herons, white ibises, and cormorants.
Answer the following questions. The answers can be found in the exhibit.

This queen sparked popular use of feathers for fashions.

In the 12th century, who brought heron plumes to Europe?

When you enter the Feather Wars exhibit, what kind of bird do you see hanging from the ceiling?

In the 1870s, the millinery industry was the fourth largest occupation in the U.S. for this group of people.

What 3 occupations ranked higher than millinery?
List three differences between the Snowy Egret and the Great Egret.
Identify these Birds

List three differences between the snowy egret and the great egret.

Great Egret is larger and the Snowy Egret
Great Egret has black legs and feet and the Snowy Egret has black legs and yellow feet
The Snowy Egret has a black bill and the Great Egret has a yellow bill.

White Ibis
Roseate Spoonbill
Yellow-crowned Night Heron
Great Blue Heron
**Make a Snowy Egret Bag Puppet**

You can make your own snowy egret puppet out of a brown paper bag.

**Materials Needed:**
- Paper lunch bag
- White paint, white paper, or white construction paper
- Crayons
- Scissors
- Glue

**Directions:**
1. Your paper bag should be closed and flat. The smooth side will be the back of your puppet. The front is the side that has the bottom showing or a tab.
   - The head will be the lift tab or flap.
   - The rest of the front will be the body of the puppet.

2. Cut out template pieces or copy and then cut out.

3. Cover the flap of the paper bag with white paper (trim and glue it on or just glue on and trim) or paint it with white paint and let dry.

4. Glue on the eyes to the head (flap).

5. Glue on the bottom beak so that it is just under the flap. (It will be glued right on to the body.)
Glue the top beak onto the flap so that it is right over the bottom beak just under the eyes. The top beak will hang over the edge of the flap. Only glue the part of the top beak to where it touches the head.

Next, glue on the wings to the side of the body.

Now glue the legs and feet on to the bottom of the body.

Let your puppet dry before using it.

After your puppet is dry, it is ready to use.
Wings
Beak
Eyes
Legs and feet
Beak
Eyes
Legs and feet