



CRITTER CONNECTIONS



Pelicans

Turk's Cap



Turk's Cap (*Malvaviscus arboreus*) is a small shrub in the mallow family, which is the same family as hibiscus. It grows in central Texas and along the coast of the Gulf of Mexico, east to Florida. They usually grow as wide as they do high, averaging 2-3 feet tall, but they can grow up to 9 feet. It grows easily and is popular as an ornamental plant in gardens.

The small flowers (2-3 inches) are bright red with overlapping petals that never fully open.

Another common name for this plant is sleeping hibiscus because of how the flowers look like a closed hibiscus flower. The overlapping petals form a twisting tube shape. The stamen, which produces pollen, sticks straight up in the middle of the petals. The flowers provide nectar for a variety of pollinators including butterflies, hummingbirds and moths.

Once the flowers are pollinated, they produce small red fruit, which are edible and taste similar to an apple. The Spanish name for this plant is Manzanilla which means little apple, relating to the apple-like fruit. The flowers are also edible, but do not have much flavor. Birds and small mammals consume the fruit and flowers.

Source and Photos: Ladybird Johnson Wildflower Center



Pelican Plate Craft

Materials:

- One toilet paper roll and one paper towel roll
- 2 paper plates
- One sheet of white paper
- Glue or staples
- Markers or paint

1. Fold each plate in half and staple or glue together at the seam. If you have two sizes of plate, use a smaller plate for the beak.
2. Cut the paper towel roll in half to create legs.
3. Cut a ½ inch slit across one end of both paper towel rolls and across both ends of the toilet paper roll.
4. Cut a 3.5 inch circle in a piece of white paper to create a head.
5. Color the beak and legs using paint or markers.
6. Attach the parts of the pelican body, using glue if needed:
 - a. Glue the head to the beak
 - b. The roll with slits in both ends is the neck - slide the head and body into the slits.
 - c. Slide the bottom of the body into the slits in the legs.
7. Add any extra features you want, cut toes at the bottom of the legs, draw an eye and feathers, use leftover paper to add a tail.

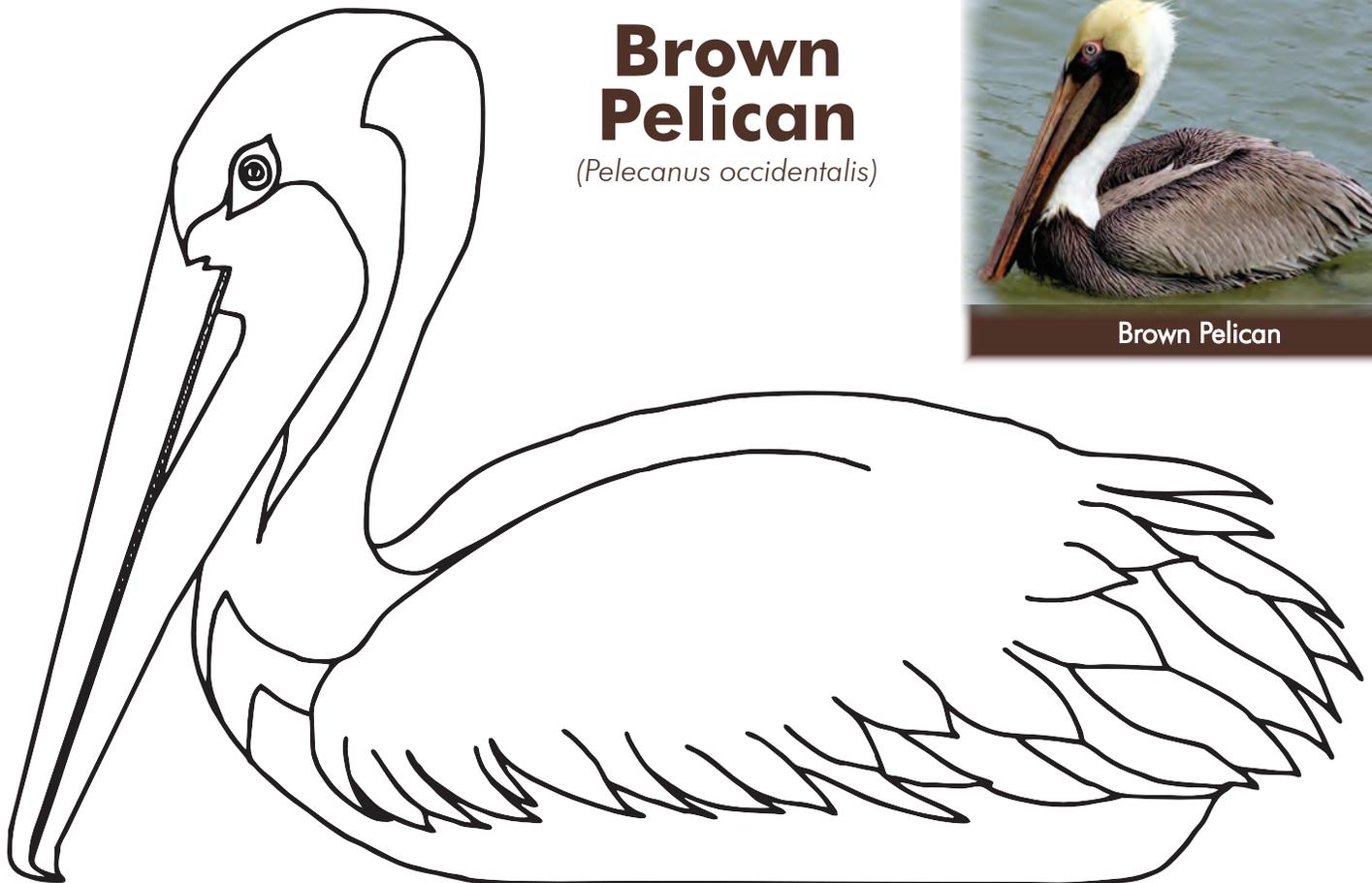


Did you know...

- ...that pelicans don't actually use the pouch under their beak to store food?
- ...that Brown Pelicans will dive into the water to catch a fish from as high as 60 feet in the air?
- ...that while many aquatic birds (ducks, geese, etc.) have webbing between their front three toes, pelicans have webbing between all four of their toes?
- ...that pelicans must run along the water to get enough speed to take off into flight?
- ...that the beak of the American White Pelican can hold up to 3 gallons of water?
- ...that gulls have been known to steal fish out of a pelican's open mouth?
- ...that pelicans use their beak like a large fishing net and can drain out any water they collect while fishing?
- ...that male and female pelicans take turns incubating their eggs by standing on them with their webbed feet?



Color Me



Brown Pelican

(*Pelecanus occidentalis*)





Pelicans

by Elanor Dean

There are two species of pelican in Texas, the American White Pelican and the Brown Pelican. They are similar in some ways and different in others. Pelicans are aquatic birds that are found near water in coastal habitats, such as the beaches of the Gulf of Mexico in Texas.



White Pelicans

Brown Pelicans are large birds with grayish-brown feathers on their body, a white neck and pale yellow feathers on their head. Their beak is long with a large throat pouch. They weigh about nine pounds and have a six foot wingspan. White pelicans are about twice as large as the brown pelican weighing over 20 pounds with a 10 foot wingspan. After reading this issue, you should measure your own wingspan to see how it compares to a pelican. White pelicans have mostly white feathers, but their primary and secondary feathers, which are the long feathers on the bottom-outside of their wings, are black. Usually you cannot see these feathers unless their wings are open.



Flying Brown Pelican

Pelicans have webbed feet to help them swim in the water, but their feet are different than ducks. Ducks have three toes that are connected by skin forming a web while their fourth toe faces backward. Pelican feet are **totipalmate**, this means all four of their toes are connected by webbing which goes all the way to the tip of their toes. This means they have very flipper-like feet.



Brown Pelican

Pelicans are carnivores that primarily eat fish. **Piscivore** (pie-siv-or) is a more specific term to describe animals that eat fish. While both types of pelicans consume fish, they catch their prey in different ways. Brown Pelicans fly high above the water looking for fish at the water's surface. When a fish is spotted, they dive towards the water, beak first, from up to 60 feet in the air. This impact from such a height would kill a normal bird, but pelicans have special air sacs under their skin which act as a cushion.



Fishing pelicans

American White Pelicans will fish together in a group. They group together on the surface of the water in a line or "U" shape formation and beat their wings against the surface of the water. This causes the school of fish to swim into shallower water where the birds can scoop up their prey. Pelicans have a pouch or sac on the bottom of their beak which acts like a fishing net to scoop up the fish and up to three gallons of water. Then, they are able to drain the water from their pouch and then tip back their head to swallow their prey whole.



White Pelicans



Pelicans do not use the pouch on their beak to store fish, they swallow their prey immediately. They primarily eat fish, but have been known to eat other aquatic prey like amphibians and crawfish.

During breeding season, pelicans grow a temporary rounded horn on their beaks, but scientists don't really know the function of this growth. Pelicans build nests in early spring, usually in colonies with other nesting pelicans. The male pelican defends the nest while the female lays 2-4 eggs. Both

parents then take turns incubating the eggs with their large webbed feet for about a month. This is different than other birds which incubate eggs using a **brood pouch**. The brood pouch is a featherless patch of skin that forms on



Pelican nest

the underside of a bird during nesting season. It allows heat-transfer to the eggs during incubation. Pelicans have such large webbed feet, they do not need to produce a brood pouch and instead use their feet. The chicks eat by sticking their beak into their parents' throat to consume partially digested fish. After about a month they are able to walk and swim and can fly when they are about two months old. On average, pelicans live to be about 30 years old.

They are quite social birds and are seen in colonies, flying together and fishing together in the case of the white pelican. Some pelicans are also known to migrate in northern parts of the United States, but the pelicans in Texas are usually present year-round.

In the late 1960s and early 1970s pelicans almost disappeared from Texas because of a type of pesticide called **DDT**. The pesticide caused their eggs to have thin shells that were delicate and broke during incubation. Because of this, they were not able to produce young, so their population dropped, and they were added to the endangered species list. Luckily, the pesticide was banned and the pelicans were able to recover and now are quite common in Texas.



White Pelican



Brown Pelicans



White Pelicans

WORD BANK

totipalmate – a foot structure found in pelicans where all four toes are connected by webbing

piscivore – an animal that eats primarily fish

brood pouch – a featherless area of skin that appears on the underside of birds during nesting season

DDT – a chemical pesticide used to kill insect pests which was banned in 1972 because of its harmful effect on other kinds of wildlife

Sources: Cornell and National Geographic
 Photos from Wikimedia Commons: Manjith Kainickara, Andy Reago & Chrissy McClarren, Becky Matsubara, Hans Stieglitz, National Park Service, Bernard DUPONT, USFWS

Pelican Word Search



- BEAK**
- BIRD**
- BROWN**
- CARNIVORE**
- COASTAL**
- FEATHER**
- FISH**
- PELICAN**
- POUCH**
- TEXAS**
- WEBBED**
- WHITE**



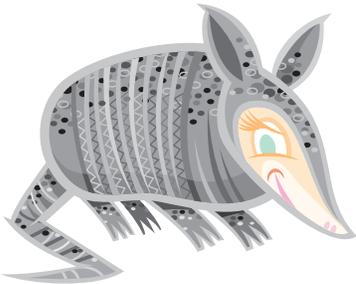
Brown Pelican

Photo Source: Andrea Westmoreland

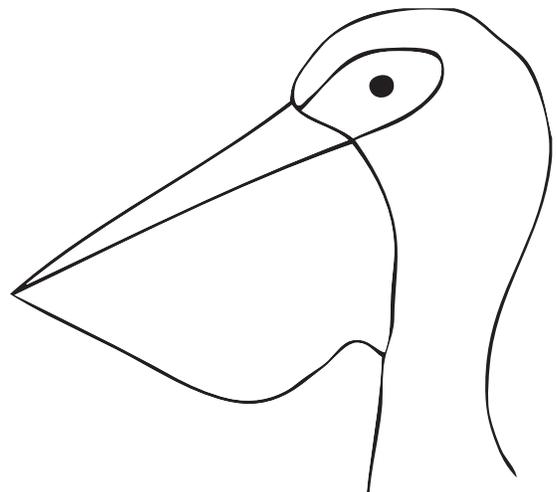
Created by Puzzlemaker at
DiscoveryEducation.com



Nancy's Corner



You can help pelicans by cleaning up trash on the beach.



Draw the pelican's prey in its beak pouch.

List two things that you learned about pelicans:

Youth Education Programs

Discovery Trunks

- * 2-week reservations
- * Seven wildlife topics
- * Hands-on materials and lessons
- * TEKS aligned for Grades K-8



Stewarding Texas

- * 40 lessons about land stewardship and conservation
- * Available online and in every Discovery Trunk
- * TEKS aligned for Grades K-12



Youth Videoconferencing

- * 45 minute live programs
- * Live animals
- * Interactive questions and worksheets
- * Designed for Grades 1-6



Educator Workshops

- * Provides hands-on training and lessons for educators
- * Grades K-8
- * 6 hours of CPE credits



Wildlife by Design

- * Classroom Presentations
- * 30-60 minutes in length
- * Hands-on, inquiry-based learning
- * TEKS aligned for Grades K-8



On-demand Webinars

- * 13-25 minute programs
- * Available anytime
- * Interactive questions and worksheets
- * TEKS aligned for Grades K-8

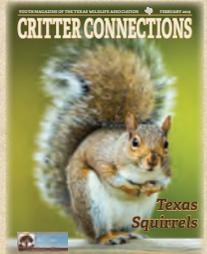


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TWA is a membership-based, non-profit organization whose goal is to educate all people, especially the youth of Texas about conservation, management and stewardship of wildlife and habitat on private land.

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