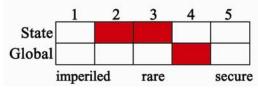


Flatwoods Digger

Fallicambarus oryktes

Rarity Rank: S2S3/G4



Identification:

- Small (2 in) burrowing crawfish with a large carapace and a small, narrow abdomen
- Areola long and closed, rostrum rounded

Photo by Jerry Walls

- Claws large (especially in males), rather triangular, inner edge of the fixed finger scooped out and bearing two large white teeth
- Bearded area inside the fingers
- Adults tend to be blackish or grayish brown with outer edge of the claws white
- Claws often bluish above
- Some adults are blue-gray

Habitat:

- The flatwoods digger is a primary burrower, and therefore rarely leaves its burrow
- Primary burrowers generally choose wet places such as meadows where the surface remains dry for extended periods of time
- Can also burrow in shallow pools and roadside ditches
- Prefers well-drained pineland soils
- May occur in colonies; patchily distributed
- Chimneys are often closed domes about 3 in high

Food habits:

Crawfish diet generally consists of plants, detritus, small live animals and carrion

Range:

AL, LA, MS

Reproduction:

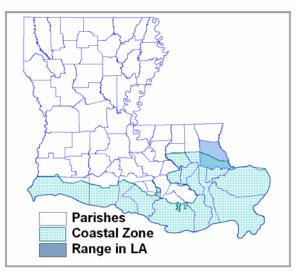
No specific reproduction information available

Threats:

Loss of habitat to urban development

Beneficial Management Practices:

- Protect habitat areas from disturbances such as water pollution and siltation
- Protect vegetation around habitat areas such as ditches



Range based on occurrences in Natural Heritage database





LA River Basins:

Pearl, Pontchartrain

References:

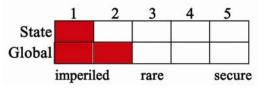
NatureServe Explorer: An online encyclopedia of life [web application]. 2002. Version 1.6 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: January 3, 2003).



Inflated Heelsplitter

Potamilus inflatus

Rarity Rank: S1/G1G2Q



Identification:

- A large freshwater mussel that may reach 140 mm (5.5 in) in length
- The shell is oval in shape with thin, flared margins
- The outer shell is typically brown to black with a pink to purple nacre (mother of pearl)
- The dorsal (upper) margin of the shell extends upward into a high thin "wing"
- The mussel digs into the bottom of rivers, with the wing pointing upward, hence the name "heelsplitter"

Habitat:

Flowing rivers with stable sand or silt bottoms

Food habits:

Mussels are filter feeders that extract plankton and detritus by pumping water through their siphons

Range:

AL, LA, MS

Reproduction:

- Most freshwater mussels have a parasitic stage in which the glochidia (larvae) attach to the gills or fins of certain types of fish
- The host fish for this species is the freshwater drum

Threats:

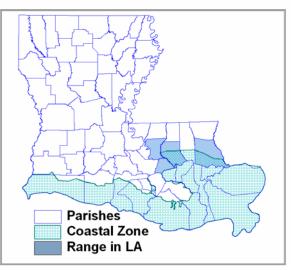
- Sand and gravel mining
- Channel alterations and impoundments for navigation and flood control

Beneficial Management Practices:

- Prevent erosion and siltation
- Follow Best Management Practices for Streamside Management Zones, possibly increasing width
- Limit sand and gravel mining

LA River Basins:

Pearl, Pontchartrain



Range based on occurrences in Natural Heritage database

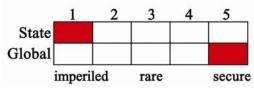




Ornate Chorus Frog

Pseudacris ornata

Rarity Rank: S1/G5



Identification:

- Stout frog, overall body color varies from green, gray to reddish brown
- Pronounced black stripe runs from nose through the eye and extends down the side to about the shoulder
- There are black markings on its side and low in back as well as a pronounced black triangle between the eyes

Habitat:

Longleaf pine forest, pine flatwoods, and cypress ponds

Food habits:

Small insects and worms

Range:

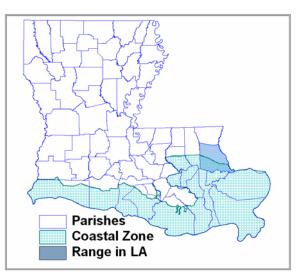
- Coastal Plain from North Carolina to eastern Louisiana
- South through much of Florida

Reproduction:

- Reaches sexual maturity at 1 year of age
- Breeding occurs during the winter in translucent pools surrounded by grass, swampy pools surrounded by sphagnum moss, and occasionally drainage ditches
- Eggs are laid in groups of 10 to 100 along twigs submerged in the water
- Hatching and transformation times are temperature dependent: the colder the temperature, the longer it takes to complete maturation
- The eggs hatch in a week or so after being laid and tadpoles transform to little frogs in two or three months

Threats:

- Habitat destruction resulting from urban development
- Species has been historically rare in Louisiana



Range based on occurrences in Natural Heritage database





Beneficial Management Practices:

Use smart growth practices, such as developing retention ponds and developing on less space

LA River Basins:

Pearl, Pontchartrain

References:

.

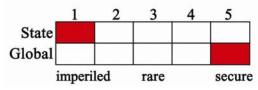
- Conant, R. and J. T. Collins. 1991. A Field Guide to Reptiles and Amphibians: Eastern and Central North America. Houghton Mifflin Company, Boston, Massachusetts.
- Dundee, H. A., and D. A. Rossman. 1989. The Amphibians and Reptiles of Louisiana. Louisiana State University Press, Baton Rouge, Louisiana.
- NatureServe Explorer: An online encyclopedia of life [web application]. 2002. Version 1.6 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: January 3, 2003).
- Wilson, L. A. 1995. Land Manager's Guide to the Amphibians and Reptiles of the South. Nature Conservancy, Chapel Hill, North Carolina.



American Oystercatcher

Haematopus palliatus

Rarity Rank: S1/G5



Identification:

- Approximately 30.5 cm tall
- Black head and back, white belly and patches on wings and tail
- Long, laterally compressed red bill; long flesh colored legs
- Shows bold, white wing stripe in flight

Taxonomic comments:

- Several races exist worldwide, two in North America
- Individuals that reside in Louisiana belong to the eastern nominate race

Habitat:

- Sand beaches, coastal salt marshes and tidal flats, particularly along the Atlantic
- Prefer remote and uninhabited beaches

Food habits:

Saltwater mollusks, crab, marine worms

Range:

- Atlantic coast from Cape Cod, Massachusetts to Yucatan, Mexico; also in the Caribbean, Bahamas, Puerto Rico, Virgin Islands and Brazil to Argentina
- Pacific coast from Gulf of California to Panama, also Peru and Chile

Reproduction:

- Individuals are sexually mature at 3 to 4 years of age
- Nest consists of a small depression scratched away in the ground and are sometimes decorated with shells

Threats:

- Habitat loss as a result of human disturbance along coastal areas and preferred nesting habitats
- Other shorebirds may compete for nest sites
- This species is shy and is disturbed as a result of slight human activity
- Eggs are under direct predation pressure from humans and other predators such as domestic and feral cats and dogs as well as other shorebirds
- Coastal land loss



Range based on occurrences in Natural Heritage database



Photo by Dan Lane



Beneficial Management Practices:

- Creation of new habitat in the form of dredge-material islands
- Posting of buffer zones surrounding wading and nesting colonies
- Increased interest and education in wetlands protection programs

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne

References:

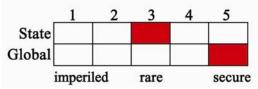
Lowery, G. H. 1974. Louisiana Birds. 3rd Ed. Kingsport Press, Tennessee.

- Nol, E. and R. C. Humphrey. 1994. American Oystercatcher (*Haematopus palliatus*). In The Birds of North America, No. 82 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.
- Peterson, R.T., and V.M. Peterson. 1980. A field guide to the birds: A completely new guide to all the birds of Eastern and Central North America. 4th Ed. Houghton Mifflin Company, New York. p.116.
- Wiedenfeld, D.A., and M.M. Swan. 2000. *Louisiana breeding bird atlas*. Louisiana Sea Grant College Program, Louisiana.



Bald Eagle

Haliaeetus leucocephalus <u>Rarity Rank:</u> S2N,S3B/G5



Identification:

- A very large raptor
- Adult with dark brown body, white head and tail, and large, yellow bill
- Immatures are dark brown with pale underwing coverts, irregular light base of tail and black bill
- Subadults intermediate between immatures and adults and exhibit various amounts of white mottling on body
- 4 to 5 years required to attain adult plumage
- Wings very long, broad and rounded at the tip with primary feathers often widely separated; wings held flat when soaring
- Adults to 1.1 m in length with wingspread to 2.3 m

Habitat:

- Nests primarily in the tops of cypress trees near open water
- Feeds in open lakes

Food habits:

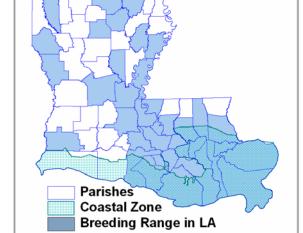
Feeds on fish, either self-caught or robbed from other birds (especially ospreys), as well as carrion, waterfowl, coots, muskrats and nutria

Range:

- Breeds throughout the United States, southern Canada and Baja California, although it is rare away from the coast
- Winters throughout the United States along river system, large lakes, or coastal areas
- In Louisiana, nests primarily in southeastern coastal parishes and, occasionally on large lakes in northern and central parishes, but these nests are less successful

Reproduction:

- Louisiana birds nest in winter and early spring
- Nests very large (up to 2.5 m across and 3.5 m deep) and used year after year



Range based on occurrences in Natural Heritage database

• Alternate nests may be constructed by breeding pair, and the birds may alternate between the two nests annually



U.S. Fish and Wildlife Service



- Usually up to 3 eggs per clutch
- Incubation period about 35 days; young fledge 72 to 78 days after hatching

Threats:

- Accumulation of pesticide residues (especially DDT) caused thinning of egg shells, which reduced reproductive success rate
- Loss of habitat
- Human disturbances to nesting pairs during nesting season

Beneficial Management Practices:

- Annual nesting surveys conducted to determine productivity
- Midwinter surveys of non-nesting birds
- Hacking program, where newly hatched young are moved to areas with no eagles, hand reared, and released, in hope that they will return to the release site to nest
- Protection of nest sites through Louisiana Department of Wildlife and Fisheries' Natural Areas Registry Program

LA River Basins:

Atchafalaya, Barataria, Mississippi, Ouachita, Pearl, Pontchartrain, Red, Sabine, Terrebonne, Vermilion-Teche



Bald Eagle Nest



Photo by Larry Korhnak

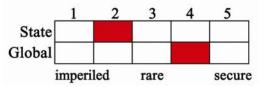
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 <u>www.BTNEP.org</u> or 1-800-259-0869



Brown Pelican

Pelecanus occidentalis

Rarity Rank: S2/G4



Identification:

- Large brown waterbird with long, flat bill and distendable gular (throat) pouch
- Adult body plumage is gray-brown to silver-brown; wing feathers darker
- Head and neck of non-breeding adults is white, whereas the hindneck and nape are cinnamon brown during the breeding season
- Bill gray to brown
- Immature generally brown with some pale mottling on wings and neck, underpart whitish
- In flight, neck is retracted heron-style
- Adults 107 to 137 cm long, wingspread to 2.4 m
- Usually found in small flocks, flying just above water surface and rarely soaring

Habitat:

- Usually occurs in bays, tidal estuaries or along the coast
- Nests commonly in shrub thickets within dunes of barrier islands
- Feeds in deep and shallow coastal waters

Food habits:

- Mainly fish and some marine invertebrates
- Captures prey by diving headfirst into water surface and trapping fish in the gular pouch

Range:

Nests in scattered coastal colonies from southern California to Chile and North Carolina to Venezuela

- Lays clutch of 2 to 3 eggs between November and July in nest on ground or in low shrubs
- Renesting after failed nesting attempt is common
- Eggs are bright, chalky white and often streaked when first laid
- Both parents incubate and brood



Range based on occurrences in Natural Heritage database



Photo by Larry Korhnak



Threats:

- Severe pesticide poisoning from DDT in the 1960's led to complete destruction of Louisiana • population from thinning of egg shells
- Decrease in nesting habitat due to erosion of barrier islands
- Illegal take of eggs for human consumption •
- Coastal land loss

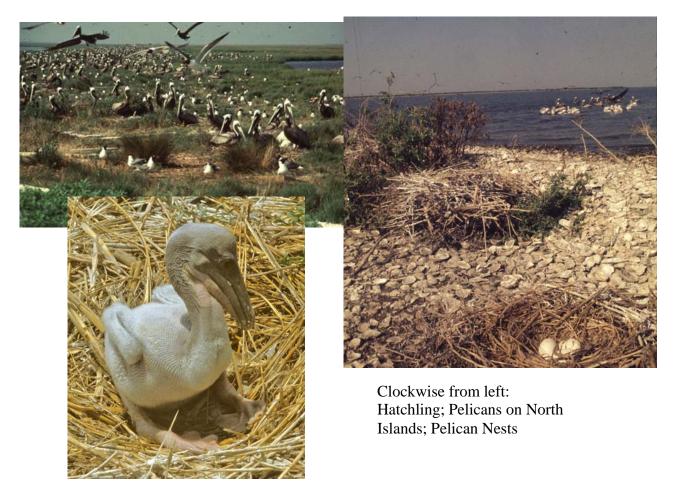
Beneficial Management Practices:

- Annual monitoring of nesting colonies •
- Signing of nesting colonies and protection against disturbance by man, especially during nesting . season
- Rebuilding of islands important to nesting •

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne

U.S. Fish and Wildlife Service



References:

Shields, M. 2002. Brown Pelican (Pelecanus occidentalis). In The Birds of North America, No. 609 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

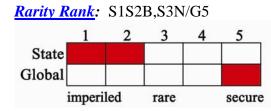
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at www.wlf.louisiana.gov/experience/naturalheritage or call 225-765-2811

www.BTNEP.org or 1-800-259-0869



Caspian Tern

Hydroprogne caspia



Identification:

- Largest tern in North America
- Upperparts pale gray, white underparts and tail
- Wings are relatively wide, distal primaries dark above and below
- Tail shallowly notched, bill stocky and orange-red with dark tip
- Legs and feet are black
- Breeding-plumaged adults have black cap with only a trace of a crest
- Immatures and winter adults have considerable white streaking in black cap
- Adults up to 58 cm in total length with a wingspread of 1.4 m
- Least social of all terns

Habitat:

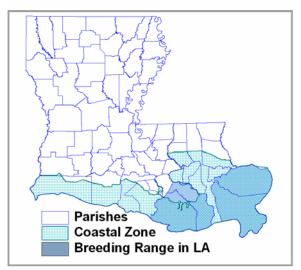
- Nests on barrier islands or shell berms in coastal salt marsh
- Found mostly along the coast during the nesting season, but may occur near large ponds, lakes and rivers during migration and winter

Food habits:

- Feeds on surface fishes and regularly robs smaller terns
- Also eats eggs and young of other terns and gulls

Range:

- Breeding Range: Locally in interior North America, along the Pacific coast from Washington to northern Mexico, and along Atlantic and Gulf coasts from Newfoundland to Texas
- Winters along coastal areas in southern portion of breeding range, south to northern South America; Also found in Old World
- In Louisiana, only ten known nesting colonies, all in the southeastern part of the state; locally common winter resident coast wide and on larger water bodies inland



Range based on occurrences in Natural Heritage database



Photo by Greg Gillson, The Bird Guide, Inc., <u>http://thebirdguide.com</u>



Reproduction:

- Nest is a shallow scrape, lined with vegetation, shells or other debris
- Lays one to three eggs and incubates from May through July for 25 to 27 days
- Egg color is pinkish to light buff, with spots or blotches that are brown and black

Threats:

- Water contamination and pollution
- Collisions with electric wires and vehicles
- Breeding colonies are very sensitive to human disturbance, which may cause nest desertion
- Coastal land loss

Beneficial Management Practices:

- Protection and enhancement, especially of nesting colonies
- Creation of habitat (dredge material islands) and artificial nests
- Prevent or limit public access to breeding and nesting sites
- Prevent aircrafts from flying low over colonies

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne

References:

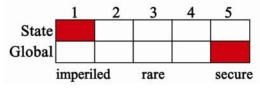
Cuthbert, F. J., and L. R. Wires. 1999. Caspian Tern (*Sterna caspia*). In The Birds of North America, No. 403 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.



Common Ground Dove

Columbina passerina

Rarity Rank: S1B,S2N/G5



Identification:

- Very small dove from 15 to 18 cm long
- Adult underparts vary from grayish brown to medium dark brown
- Forehead, face, sides of neck, breast and underparts are pinkish gray
- Crown, nape, and hind neck vary from bluish gray to grayish pink
- Black, square-shaped tail
- Feet and legs pinkish
- Dark spots on folded wings
- Wings with large cinnamon patches visible in flight

Taxonomic comments:

Two subspecies of *Columbina passerina* breed in the United States: *C. p. passerina* is found from Eastern Texas throughout the Gulf States including Louisiana

Habitat:

- Cultivated land including farms, orchards, and old cane fields
- Clearings, roadsides, and wood edges

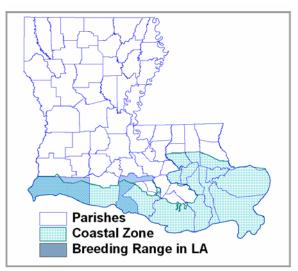
Food habits:

- Mostly small weed and grass seeds
- Readily feeds at feeders

Range:

Southern parts of the United States to Costa Rica and northern South America

- Nests are typically platforms made of small roots, grass and twigs built either in small shrubs, small trees, or amongst leaves on the ground
- Pairs begin to nest in March and eggs hatch 44 days after start of incubation, typically between April and May
- Nests consist of two white eggs
- Additional clutches may be laid in October



Range based on occurrences in Natural Heritage database

Photo by Dan Lane





Threats:

- Loss of habitat to pine management and residential development
- Human disturbance to nesting areas
- Exotic red imported fire ants may contribute to decline

Beneficial Management Practices:

- Protection of existing habitat through conservation of natural shrub communities and riparian zones
- restoration of degraded habitat
- Controlling exotics

LA River Basins:

Vermilion-Teche, Mermentau, Calcasieu, Sabine

References:

.

- Bowman, R. and G.E. Woolfenden. 1997. Nesting chronology of the common ground-dove in Florida and Texas. Journal of Field Ornithology 68:580-589.
- Bowman, R. 2002. Common Ground-Dove (*Columbina passerina*). *In* The Birds of North America, No. 645 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Lowery, G. H. Jr. 1974. Louisiana Birds.3rd Ed. Kingsport Press, Tennessee.

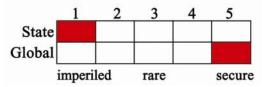
- Peterson, R.T., and V.M. Peterson. 1980. A field guide to the birds: A completely new guide to all the birds of Eastern and Central North America. 4th Ed. Houghton Mifflin Company, New York.
- Wiedenfeld, D.A., and M.M. Swan. 2000. Louisiana breeding bird atlas. Louisiana Sea Grant College Program, Louisiana.



Crested Caracara

Caracara cheriway

Rarity Rank: S1/G5



Identification:

- Medium sized raptor with total length ranging from 49 to 58 cm
- Black crest and bare, orange face
- Black lower back and belly, white neck, patterned upper breast and back, long yellow legs
- In flight, white patches on tips of wings with white head and tail with a black tip
- Immature birds lack the white neck, but have a continuation of the brown pattern of the upper breast and back of mature birds

Taxonomic comments:

Formerly included in *C. plancus*, but recognized as a separate species on the basis of analyses of plumage, morphology, and reported hybridization. *C. planus*, now referred to as the Southern Caracara, is restricted to southern Peru and central Brazil south to Tierra del Fuego and the Falkland Islands.

Habitat:

This species occurs in open areas such as prairies or rangeland with scattered trees

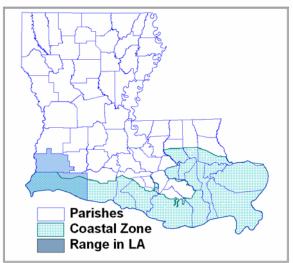
Food habits:

Carrion, insects, fish, reptiles, amphibians, birds and eggs

Range:

- Mainly southeast Texas, also Florida
- Louisiana population is restricted to the extreme southwest portion of the state, particularly Cameron Parish
- Range extends into South America

- Pairs mate for life and live together throughout the year
- Both sexes build nest between January and March after which 2 to 3 large brown eggs with brown blotches are laid
- Both parents incubate the eggs for one month, and young fledge about 2 months after hatching



Range based on occurrences in Natural Heritage database



Photo by Dan Lane



Threats:

- Unwarranted negative attitudes towards these birds result in shooting and poisoning in parts of its range
- Collisions with vehicular traffic when scavenging along roadsides, particularly for first-year juveniles
- Loss of habitat due to urban and agricultural development

Beneficial Management Practices:

Raise awareness of and educate the general public about where species occurs

LA River Basins:

Mermentau, Calcasieu, Sabine

References:

Lowery, G. H. Jr. 1974. Louisiana Birds 3rd Ed. Kingsport Press, Tennessee.

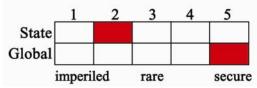
- NatureServe. 2003. NatureServe Explorer: An online encyclopedia of life [web application]. Version 1.8. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer.
- Morrison, J. L. 1996. Crested caracara (*Caracara plancus*). *In* The Birds of North America, No. 249 (A. Poole and F. Gill, eds.). The Academy of natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.
- Peterson, R.T., and V.M. Peterson. 1980. A field guide to the birds: A completely new guide to all the birds of Eastern and Central North America 4th Ed. Houghton Mifflin Company, New York.



Glossy Ibis

Plegadis falcinellus

Rarity Rank: S2/G5



Identification:

- Dark wading bird with long down-curved bill
- During breeding season, adult plumage is rich



Photo by Jim Scarff

- chestnut with iridescent purple-green on the back, wings and head
 Facial skin (lore) dark blue, bordered above and below by thin line of light colored skin, which does not extend behind the eye
- Iris brown, bill gray, legs gray-brown
- In winter, loses most of chestnut feathering and are mostly metallic green with fine white streaking on head and neck; facial skin dull gray with pale blue border
- Adult length is 19 to 30 in and wingspread is up to 40 in

Habitat:

- Generally flocks can be found in marshes
- Nests in shrubs and trees near water

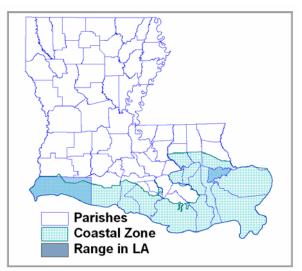
Food habits:

Feeds on crustaceans, small snakes, and insects

Range:

- Breeding Range: Nests locally throughout the Atlantic coast of U.S. and the Gulf Coast west to southeastern Louisiana; also West Indies, northern South America, and Old World
- Winters in southern portion of breeding range; in LA may be found throughout coastal region, but rare in western LA
- In Louisiana, known to nest on islands in the Mississippi River delta and Barataria Bay; total nesting population probably less than 200 pairs.

- Nests are a dense platform of twigs or reed, often lined with leaves and other vegetation
- In Louisiana, nests are made of bulrush or grass
- Eggs are deep blue to greenish-blue in color which fades during incubation
- Clutch size of three to four eggs
- Brooding mostly by female, but both parents feed young



Range based on occurrences in Natural Heritage database



Threats:

- Potentially sensitive to pesticides and oil spills
- Drainage of marshes, swamps and shallow lakes reduces habitat area
- Human disturbance
- Coastal land loss

Beneficial Management Practices:

- Creation of new habitat in the form of dredge-material islands
- Posting of buffer zones surrounding wading and nesting colonies
- Increased interest and education in wetlands protection programs

LA River Basins:

Pontchartrain, Mermentau, Calcasieu, Sabine

References:

Davis, W. E., Jr., and J. Kricher. 2000. Glossy Ibis (*Plegadis falcinellus*). In The Birds of North America, No. 545 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.



Gull-billed Tern

Gelochelidon nilotica

Rarity Rank: S2B,S2S3N/G5



Identification:

- Resembles a gull in body shape and behavior
- Thick, black bill
- Upperparts are light gray and underneath is white
- Wings are unmarked and wider than other terns
- Tail is short and notched in the middle
- Crown and nape of breeding adults are black
- Adults can be up to 38 cm in length and have a wingspread of 94 cm

Habitat:

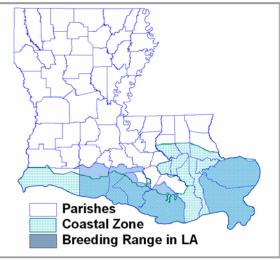
- Coastal beaches and estuaries, sparsely vegetated nearshore islands, and barrier islands
- Generally nests within colonies of Black Skimmers (*Rynchops niger*) on open beaches above high tide level
- Feeds and nests around marshes
- Most nests are on sandy beaches or barrier islands along the Atlantic and Gulf coasts

Food habits:

Feeds primarily on insects caught in the air, but also on small fish, reptiles and amphibians

Range:

- Breeding Range: Locally along the Atlantic and Gulf coasts from New York to Mexico; southern California, the Caribbean, and coastal South America; also Old World
- Winters from the Gulf coast through coastal Central America to South America
- In Louisiana, an uncommon and local summer resident along the coast, but may be found coast-wide in the winter



Range based on occurrences in Natural Heritage database

- Lays three eggs in a shallow depression that is usually lined with rocks or shells
- Incubation period of 22 to 23 days
- Brooding and feeding carried out by both parents



Photo by Jim Scarff



Threats:

- Major concern is human disturbance through boating, recreation and development
- In many areas colonies can be overrun by gulls
- Coastal land loss

Beneficial Management Practices:

- Protection of occupied as well as potential nesting sites
- Gull control for established tern colony sites

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne, Atchafalaya, Vermilion-Teche, Mermentau

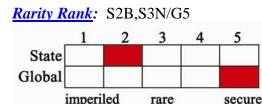
References:

Parnell, J. F., R. M. Erwin, and K. C. Molina. 1995. Gull-billed Tern (*Sterna nilotica*). In The Birds of North America, No. 140 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, D.C.



Osprey

Pandion haliaetus



Identification:

- Large raptor with long, relatively narrow, rounded wings
- Head mostly white with dark line though the eye and a dark, mottled nape
- Upperparts are dark brownish-black and under parts white
- In flight, distinct patches at wrist, black wingtips and distinct crook in wings at wrist can be seen
- Length of adults can be up to 25 in with a wingspread of 72 in

Habitat:

- Habitat varies but common elements include an adequate supply of shallow water prey, open nesting areas without predators, and an ice free season long enough to allow fledging of the young
- Use of artificial sites such as telephone poles for nesting has increased recently

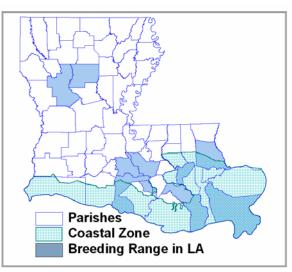
Food habits:

Dive for prey feet first, and therefore feed on surface-schooling fish

Range:

- Breeding Range: Nests throughout southern Canada and Alaska, the western United States, the Gulf of Mexico and U.S. Atlantic coast, south along both coasts to Belize; also Old World
- Winters in southern parts of its breeding range and South America
- In Louisiana, winters along the coast and on larger inland lakes

- Two to four eggs laid per clutch from January through April
- Both sexes incubate, which lasts 28 to 43 days. Young fledge at seven to eight weeks
- Nests are built using large sticks and grasses, are often reused several years and can weigh up to one half ton
- Eggs are creamy white to pinkish cinnamon and are heavily dotted in reddish brown



Range based on occurrences in Natural Heritage database



Photo by Bill Ford



Threats:

- In the past, chemical pollution such as DDT caused eggshell thinning
- When nesting around highways, are vulnerable to collisions with vehicles
- Loss of nest sites due to agricultural development and logging

Beneficial Management Practices:

- Improvement of food supplies through fisheries management
- Providing artificial nest sites has been successful in the past

LA River Basins:

Pearl, Pontchartrain, Mississippi, Barataria, Terrebonne, Atchafalaya, Vermilion-Teche, Red, Ouachita



Photo by Larry Korhnak

References:

- Poole, A. F., R. O. Bierregaard, and M. S. Martell. 2002. Osprey (*Pandion haliaetus*). In The Birds of North America, No. 683 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: August 9, 2007).

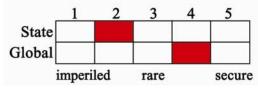
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or 225-765-2811 <u>www.BTNEP.org</u> or 1-800-259-0869



Peregrine Falcon

Falco peregrinus

Rarity Rank: S2N/G4



Identification:

- Large falcon
- Adults bluish to gray above with a dark head and dark cheek stripe
- Buff to cinnamon below with dark spotting on the belly and strongly barred flanks
- Tail long and barred
- Bill grayish
- Cere and legs yellow
- Immatures brownish to bluish-brown with dark cheek stripe and heavy dark streaking on underparts
- Adults to 51 cm total length and wingspread to 1.2 m
- Usually solitary except during the nesting season

Habitat:

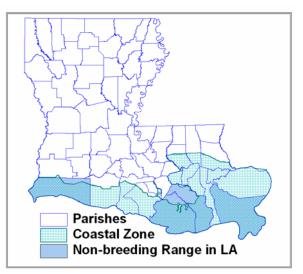
- Coastal marshes and lakes
- Primarily nests on cliffs, but in southern U.S. formerly nested in cavities of old, large trees
- In winter generally found in open areas along the coast

Food habits:

Birds are the most common prey, but also consumes small mammals and insects

Range:

- Formerly one of the most widespread birds, nesting in all regions of the world except Antarctica, but now greatly reduced in numbers and distribution is spotty
- A nest found by Roger Tory Peterson near Tallulah, Madison Parish, in 1942, is the only reported nesting record from the state
- Within Louisiana, generally restricted to the coastal region in winter but may be seen statewide during migration



Range based on occurrences in Natural Heritage database



U.S. Fish and Wildlife Service



Reproduction:

- One brood per season
- Nests built on ledges by scraping a bowl in dirt, sand or gravel substrate
- Eggs fairly smooth and are cream to brown or reddish in color with spots and blotches of brown, red and purple
- Clutch size normally about 3 to 6 eggs

Threats:

- Dramatically declined due to DDT and other organochlorine pesticides
- Prior to DDT declines, shooting of birds was a principle mortality factor
- Habitat loss, particularly the wetland areas that supported large concentrations of the prey species of peregrines

Beneficial Management Practices:

- Protection of nesting sites
- Protection of wintering sites
- Public information regarding the vulnerability of this species
- Rebuilding of habitats with dredge material

LA River Basins:

Pontchartrain, Barataria, Terrebonne, Mississippi, Mermentau, Calcasieu, Sabine



Photo by James Weaver Cornell Laboratory of Ornithology

Lafayette Natural History Museum

References:

White, C. M., N. J. Clum, T. J. Cade and W. G. Hunt. 2002. Peregrine Falcon (*Falco peregrinus*). In The Birds of North America, No. 660 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

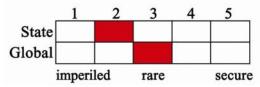
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 www.BTNEP.org or 1-800-259-0869



Piping Plover

Charadrius melodus

Rarity Rank: S2N/G3



Identification:

- A relatively small plover
- Light brown to sandy-gray above and white below
- Breeding-plumage adults possess a single, narrow black breast band, a black bar on the front part of the crown that extends to the eyes, a stubby bill with orange base and black tip, and orange legs



U.S. Fish & Wildlife Service

- Winter-plumage adults and juveniles are grayer, lack the contrasting black markings, only show a sandy patch on each side of breast and have completely black bills
- All plumages have a white rump
- Adults to 18 cm total length with a wingspread to 39 cm

Habitat:

Generally found on beaches and mudflats of barrier islands in southeastern coastal parishes

Food habits:

- An active forager, piping plovers run a short distance, pause, catch a prey item, then continue
- Feeds on a variety of aquatic invertebrates such as insects, crustaceans and mollusks

Range:

- Breeding Range: U.S. and Canadian Great Plains from Nebraska north to Alberta and Manitoba, Beaches bordering the Great Lakes, and Atlantic coastal beaches from North Carolina to Newfoundland
- Winter distribution includes the southern Atlantic and Gulf coast, and several Caribbean Islands

- Males begin constructing nests as part of courtship
- Nests are scrapes of sandy substrate with pebble or shell lining
- One brood per year
- Chicks are tended for about 30 to 35 days, at which time they are fledglings
- Eggs are pale buff with black, brownish and purplish splotches
- Incubation by both parents



Range based on occurrences in Natural Heritage database



Threats:

- Human disturbances and destruction of nests and young
- Loss of nesting habitat from erosion of nesting and wintering habitat as well as irrigation projects, woody species encroachment, pollutants, predation, livestock trampling and disturbance by dogs and coyotes
- Coastal land loss

Beneficial Management Practices:

- Restrict access to nesting beaches
- Annual surveys of nesting and wintering populations
- Research on diet and feeding habits, and effect of pesticides and pollutants on populations
- Identify migration routes
- Determine wintering ecology
- Create beach habitat with dredge material

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne, Vermilion-Teche, Mermentau, Calcasieu, Sabine



References:

Haig, S. M. 1992. Piping Plover (*Charadrius melodus*). *In* The Birds of North America, No. 2 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union. (This account replaces an earlier draft, with limited distribution, published in 1991.)

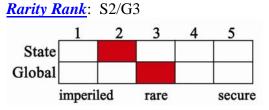
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 www.BTNEP.org or 1-800-259-0869





Red-cockaded Woodpecker

Picoides borealis



Identification:

- Relatively small woodpecker
- Back and wings black with prominent white bars
- Crown, nape and back of neck are black and there is a black line from the bill down to side of neck
- Cheeks, side of neck and throat are white and has a white eyebrow line
- Tail is black with white on the outer feathers
- Underparts white with black streaks on flanks
- Males with inconspicuous red marks on sides of crown ("cockades")
- Immatures brownish and may have red on center of crown
- Bill and legs black
- Adults up to 22 cm total length

Habitat:

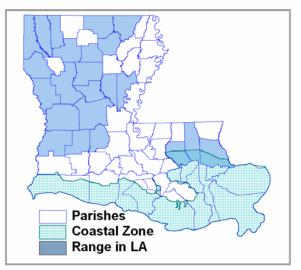
- Longleaf pine forests, mixed pine-upland hardwood forests with little or no hardwood midstory
- The average cavity tree ranges from 60 to 126 years for longleaf pine, 70 to 90 years for loblolly pine and 75 to 149 years for shorleaf pine
- Good habitat consists of pine stands with trees 22.9 cm and larger in diameter at breast height
- Also forages in pole stands

Food habits:

Feeds on a variety of insects gleaned from beneath bark scales and also consumes fruits of shrubs and vines

Range:

- Widely distributed, but local, throughout the southeastern coastal states from eastern Texas to southern Maryland
- Also in Arkansas, Tennessee, Kentucky and Oklahoma
- Formerly found throughout Louisiana in mature pine forests



Range based on occurrences in Natural Heritage database



© Julia Sims



Reproduction:

- A cooperatively breeding species typically found in family groups that, in addition to the nesting pair, include up to 2 male offspring from previous nesting seasons
- Excavate cavities almost exclusively in live mature pines that have been infected with heartwood fungus
- Nesting occurs in adult male cavity
- 2 to 5 eggs are incubated for 10 to 13 days

Threats:

- Loss of habitat from subdivision development
- Pine forests managed with short rotations
- Fire suppression, resulting in hardwood midstory on otherwise appropriate habitat

Beneficial Management Practices:

- Identify and protect nesting clusters on private land
- Increase public awareness of species and its habitat requirements through educational materials
- Participate in state-private sector cooperatives to address management issues pertaining to the species
- Cluster augmentation (moving females from one cluster to another) for family groups with no females
- Utilize artificial cavities in areas where adequate trees for cavity construction do not occur

LA River Basins:

Pearl, Pontchartrain, Vermilion-Teche, Mermentau, Calcasieu, Sabine, Red River, Ouachita



U.S. Forest Service

Left: Active Red Cockaded Woodpecker cavity



Photo by Christopher A. Melder

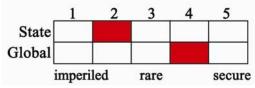
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 www.BTNEP.org or 1-800-259-0869



Reddish Egret

Egretta rufescens

Rarity Rank: S2B,S2N/G4



Identification:

- Medium sized heron with two different color phases: one is dark, red-brown to rust colored on the head and neck with slate gray body and another is all white and very uncommon in Louisiana
- Stout bill with pink base and black tip
- Dark bluish to gray legs
- Adult length is between 69 and 82 cm with a wingspread of about 1.2 m
- Solitary during non-breeding season

Habitat:

- Nests in mixed species colonies amidst shrubby vegetation
- Generally restricted to sandy beaches or shallow ponds near the coast or on barrier islands when feeding

Food habits:

Mainly small fish

Range:

- Nests locally from the Northern Gulf Coast south through the Caribbean and both coasts of Mexico, including the Yucatan Peninsula
- Winters throughout the breeding range
- In Louisiana, the species is found throughout the coast during migration and less commonly in winter
- During nesting season it is restricted to islands in southeastern Louisiana

- One brood per season, clutch size usually three or four
- Nests are built using grasses, sticks and forbs in a tree, vegetation or on the ground, and are rarely close together
- Eggs are ovate to elliptical in shape, bluish green in color and have a smooth texture
- Incubation accomplished by female
- Fledglings leave the nest after nearly five weeks and are able to fly as early at six and a half weeks

h the Caribbean and both coasts of

Range based on occurrences in Natural Heritage database



U.S. Fish and Wildlife Service





Threats:

- Entanglement in fishing nets and lines
- Beach development (especially in Florida) decreases the quantity of suitable habitat
- Human disturbance may lead to nest abandonment
- Coastal land loss

Beneficial Management Practices:

Roping or fencing off nesting sites during breeding seasons

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne



Nesting Reddish Egrets

U.S. Fish and Wildlife Service

References:

.

Lowther, P. E., and R. T. Paul. 2002. Reddish Egret (*Egretta rufescens*). In The Birds of North America, No. 633 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

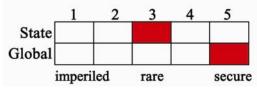
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or 225-765-2811 <u>www.BTNEP.org</u> or 1-800-259-0869



Roseate Spoonbill

Platalea ajaja

Rarity Rank: S3/G5



Identification:

- Wading bird with a long, flat, spoon-like bill
- Adults have a naked, greenish head; white neck, back and upper breast; red wing coverts and an orange tail; rest of body and wings pink
- Length of adults is 76 to 86 cm, wingspread of 1.3 m
- Flies in small to medium sized flocks
- Fledglings are white with a feathered head

Habitat:

- Prefers freshwater but is also known to inhabit varieties of marine and brackish waters
- Forages in shallow water ponds or sloughs in saline to freshwater marshes
- Nests over standing water in shrubs and small trees with other colonial birds

Food habits:

Moves bill side to side in water to capture various small fish, crustaceans, mollusks and insects

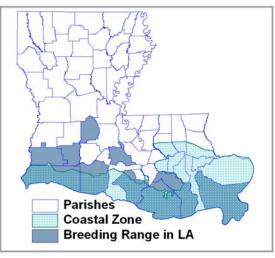
Range:

- Local resident along the coasts of Texas, Louisiana and Florida as well as the central west Mexican coast and south to central Chile and Argentina
- In winter, some northern-breeding individuals move south

- In Louisiana, breeds early spring to summer
- Female builds the nest while the male gathers materials abundant in the area (twigs, leaves, bark, moss, etc)
- Eggs are ovate to elliptical ovate or elongate ovate in shape with a rough granular texture and dirty white color that may have a pink or blue-green tint and may also be spotted in brown, purple or drab
- Incubation is accomplished by both sexes, switching up to three times daily
- Both male and female feed fledglings for two months, at which time they leave the colony and will begin breeding at three years



Photo by Nancy Webb



Range based on occurrences in Natural Heritage database



Threats:

- Shooting and trapping of other species can disrupt behavior
- Contaminantes such as pollution and pesticides
- Degredation of coastal habitat from salt water intrusion, industrial activities, canal dredging and other hydrologic alterations
- Coastal land loss

Beneficial Management Practices:

- Restoration efforts along coastal ecosystems involving the release of Mississippi River water into marshes and estuaries
- Identify and monitor sources of contamination
- Create buffer zones for boating traffic around nesting colonies
- Habitat creation with dredge materials

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne, Atchafalaya, Vermilion-Teche, Mermentau, Calcasieu, Sabine



© Korhnak

References:

- Dumas, J. V. 2000. Roseate Spoonbill (*Ajaia ajaja*). In The Birds of North America, No. 490 (A. Poole amd F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: August 9, 2007).

Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or 225-765-2811 <u>www.BTNEP.org</u> or 1-800-259-0869





Sandhill Crane

Grus canadensis

Rarity Rank: S1N/G5



Identification:

- Grey in color, often with varying degrees of rust coloration throughout
- Long legs and bill are black
- Dull red skin on crown and lores, whitish chin, cheek and upper throat
- Up to 1.2 m tall
- In flight, neck is extended and wingspan is 6 to 7 feet
- Sexes similar in plumage
- Immature birds lack red patch, and grey body is irregular mottled with brownish-red
- Full adult plumage is reached after 2 and one-half years

Taxonomic comments:

- There are 3 to 6 subspecies of Sandhill Crane
- Individuals that reside in Louisiana belong to *Grus canadensis tabida*, the Mid-continent Gulf Coast population

Habitat:

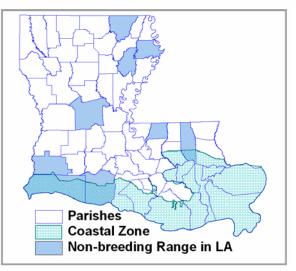
Prairies, fields and marshes

Food habits:

- Omnivorous
- Plant roots, seeds, grains, insects, occasionally small animals
- Diet dependent upon local availability and season

Range:

- Throughout North America
- Breeds mostly in Canada although historically bred throughout the Midwestern plains
- Winters along the coast of the Gulf of Mexico and in southwest U.S.



Range based on occurrences in Natural Heritage database



Photo by Dan Lane



Reproduction:

- Breeding does not begin until birds are 2 to 7 years of age
- Pairs mate for life
- Nests are constructed on the ground with vegetation such as sticks and grass
- Clutches consist of two eggs that range in color from pale green to spotted brown
- Males and females share incubation duties equally during day light hours; females primarily at night

Threats:

- Loss of wetlands habitat and coastal land loss
- Hunting

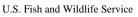
Beneficial Management Practices:

- Preserve wetland habitat
- Educate the public

LA River Basins:

Pontchartrain, Mississippi, Vermilion-Teche, Mermentau, Calcasieu, Sabine, Red River, Ouachita







Sandhill crane chick Photo by Larry Korhnak

References:

Lowery, G. H. 1974. Louisiana Birds. 3rd Ed. Kingsport Press, Tennessee.

- Peterson, R.T., and V.M. Peterson. 1980. A field guide to the birds: A completely new guide to all the birds of Eastern and Central North America. 4th Ed. Houghton Mifflin Company, New York.
- Tacha, T. C., S. A. Nesbitt, and P.A. Vohs. 1992. Sandhill Crane (*Grus canadensis*). In The Birds of North America, No. 31 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.

Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 www.BTNEP.org or 1-800-259-0869

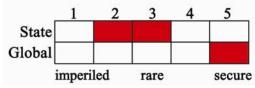




Short-eared Owl

Asio flammeus

Rarity Rank: S2S3N/G5



Identification:

- Medium sized owl without distinct ear tufts
- Body color is buffy or gray with a streaked neck and upper breast
- Underparts are spotted or barred and facial disks are pale buff
- Yellow irises
- Adults are up to 43 cm in length with wingspread of 112 cm

Habitat:

- Prairies, marshes, pastures, and open fields
- Often seen on airport grounds
- Nests are made on the ground and therefore are usually in dry areas with plenty of vegetation to hide the incubating female and eggs

Food habits:

- Small rodents, insects and small birds
- Will occasionally feed during the day but usually prefer twilight

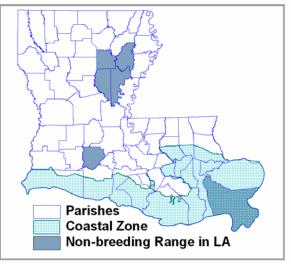
Range:

- Breeding Range: Northern and western United States, Canada and the Greater Antilles, and South America
- Winters in same areas as breeding, but also disperses into Southern United States and Central America

- May use communal winter roosts as local breeding territories
- The ground nests are lined with grass and downy feathers by the female
- Egg is short elliptical shape, has a smooth texture and a cream or white color
- Incubation and brooding accomplished by the female while the male provides protection and food
- Nests are vulnerable to predation because they are on the ground, therefore selective pressure has favored rapid growth and development



Photo by Dr. Jacob Faust



Range based on occurrences in Natural Heritage database





• Offspring leave the nest after 12-18 days

Threats:

- Loss of habitat due to human encroachment
- Predation on eggs
- Disturbance of nest sites by domestic and feral cats and dogs

Beneficial Management Practices:

- Maintain large areas of habitat for the owls as well as prey
- Monitor predation and human disturbance
- Educate communities to raise awareness of the species

LA River Basins:

Pontchartrain, Mississippi, Mermentau, Red, Ouachita

References:

Holt, D. W. and S. M. Leasure. 1993. Short-eared Owl (*Asio flammeus*). In The Birds of North America, No. 62 (A. Poole and F. Gill, Eds.). Philidelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

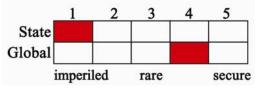




Snowy Plover

Charadrius alexandrinus

Rarity Rank: S1B,S2N/G4



Identification:

- One of the smallest of the North American Plovers
- Upperparts range from gray-brown to tan with white underparts and incomplete breast band
- Forehead and eyebrow line are white with dark patches behind the eyes
- Legs slate colored
- Relatively long, thin black bill
- Length of adults is about 16 cm; the wingspread is 34 cm

Habitat:

- Nests in loose colonies on open beaches
- Winter habitat is mostly on dry sandy or shell beaches, above the high tide mark and along the coast or on barrier islands.

Food habits:

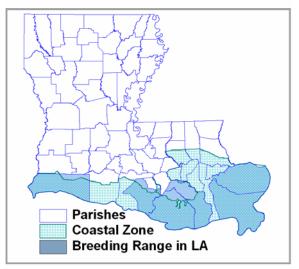
Variety of invertebrates including crustaceans, worms and insects

Range:

- Breeding Range: locally in coastal and western United States, Baja California, the Gulf coast of Texas and Florida, the Caribbean, and Central and South America as well as the Old World
- Winters in coastal regions of nesting range
- In Louisiana, the species is a relatively rare migrant and winter resident along the coast

Reproduction:

- Females may have up to three broods per seasons, with clutch sizes ranging from two to six eggs
- Female and male incubate and build the nest, but do not provide food for fledglings
- Nests are commonly depressions scraped into the sand and lined with material such as pebbles, vegetation or shell fragments
- Eggs are oval shaped with a buffy background, sometimes spots and scrawls are present in brown or black



Range based on occurrences in Natural Heritage database





Threats:

- Trampling of eggs and nests by humans, vehicles or horses
- Entanglement in discarded fishing line
- Habitat degredation or abandonment as a result of the expansion of beachfront development and recreation
- Habitat loss due to coastal land loss and erosion

Beneficial Management Practices:

- Closing beaches off to the public
- Roping or fencing off areas to decrease disturbance of nesting sites

LA River Basins:

Pontchartrain, Mississippi, Barataria, Terrebonne, Atchafalaya, Vermilion-Teche, Mermentau, Calcasieu, Sabine

References:

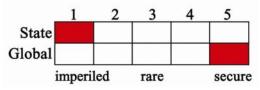
- NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: August 9, 2007).
- Page, G. W., J. S. Warriner, J. C. Warriner, and P. W. C. Paton. 1995. Snowy Plover (*Charadrius alexandrinus*). In the Birds of North America, No. 154 (A. Poole and F. Gill, eds.). They Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.



Sooty Tern

Onychoprion fuscatus

Rarity Rank: S1B/G5



Identification:

- Medium sized tern, 36 to 45 cm long with a wingspread of 82 to 94 cm
- Sexually monomorphic
- Adults in breeding with completely black back, white belly, forked tail with white edges, white brow, sharp pointed bill, with black feet and legs
- Adults in non-breeding have plumage similar but blackish feathers of crown and nape with white margin
- Immature birds are dark brown with white flecks along back and wings

Taxonomic comments:

Some consider the Sooty Tern to be a superspecies with *Onychoprion anaethetus*, the Bridled Tern

Habitat:

- Stays out at sea unless nesting
- Nests on remote islands and beaches with scattered or no vegetation

Food habits:

- Small fish as well as squid and insects
- Individuals in flock generally remain 1 to 20 meters above water when hunting for food, descending simultaneously when food is spotted
- When prey descend, flock rises up again
- Unlike diving birds, must catch prey within a few centimeters of surface

Range:

Tropical islands and coasts along the Atlantic, Pacific and Indian Oceans

Reproduction:

- Individuals begin to breed at about 6 to 8 years of age
- Nest is a simple depression in the sand, sometimes surrounded by sea plants
- A single white egg with brown spots is laid between April and June (more variable in other locations) and is tended by both parents throughout a month of incubation



Range based on occurrences in Natural Heritage database



Photo by Dan Lane





• Young fledge about 1 to 2 months after hatching

Threats:

- Predation by cats
- Egg collection by other seabirds and humans
- Coastal land loss

Beneficial Management Practices:

- Create beach habitat with dredge materials
- Create nesting areas

LA River Basins:

Pontchartrain, Mississippi, Barataria

References:

Cooper, L., and T. Goodier. 2002. How long do birds live? San Francisco Bay Bird Observatory. http://www.sfbbo.org/longevity.htm (20 Jan. 2003).

Lowery, G. H. Jr. 1974. Louisiana Birds. 3rd Ed. Kingsport Press, Tennessee.

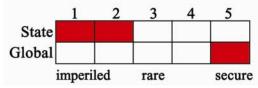
- NatureServe Explorer: An online encyclopedia of life [web application]. 2002. Version 1.6 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed:December 6, 2002).
- Peterson, R.T., and V.M. Peterson. 1980. A field guide to the birds: A completely new guide to all the birds of Eastern and Central North America 4th Ed. Houghton Mifflin Company, New York.
- Screiber, E. A., C. J. Feare, B. A. Harrington, B. G. Murray, Jr., W. B. Robertson, Jr., M. J. Robertsons, and G. E. Woolfenden. 2002. Sooty Tern (*Sterna fuscata*). *In* The Birds of North America, No. 665 (A. Poole and F. Gills, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Wiedenfeld, D.A., and M.M. Swan. 2000. Louisiana breeding bird atlas. Louisiana Sea grant College Program, Louisiana.



American Swallow-tailed Kite

Elanoides forficatus

Rarity Rank: S1S2B/G5



Identification:



© John Cang www.johncangphoto.com

- A raptor with long, pointed wings and a deeply forked tail
- White head, neck and parts under with black upperparts, wings and tail
- Immatures have white tips on black feathers and fine, dark streaks on the head and breast
- Largest of the North American kites
- Adult length ranges from 51 to 61 cm with a wingspread of 1.3 m

Habitat:

- Prefers lowland areas particularly in the coastal plain along river systems
- Pines adjacent to swampland particularly attractive to nesters
- Areas with tall trees that can be used for nesting and with open areas to catch prey

Food habits:

- Insects, small snakes, lizards, frogs, and nestling birds
- Catches and eats most prey while in flight

Range:

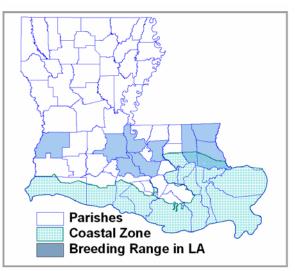
- Breeding Range: northern subspecies from South Carolina to Florida, west to Louisiana; southern subspecies from southeastern Mexico to northern South America
- Winters in South America
- In Louisiana, migrants may be observed statewide

Reproduction:

- Nests are made of twigs and are up to 50 cm across
- Nests are lined with Spanish Moss and are located near the tops of large trees along rivers or forest openings
- Lays two or three eggs which are shades of white with brown and reddish-brown markings
- Incubation, by male and female, lasts about 28 days, young fledge at five to six weeks

Threats:

• Vulnerable to harassment by humans and low-flying aircraft while roosting



Range based on occurrences in Natural Heritage database

• Habitat loss caused by a variety of actions including agricultural, urban development, logging, and flood control



• Harassment on wintering grounds is a major threat to northern species

Beneficial Management Practices:

- Limit timber harvest near active nest trees to provide buffer for nesting birds
- Restrict airspace over large roosting areas during breeding season and prevent on ground human disturbance
- Thinning of some timber stands may benefit nesters

LA River Basins:

Pearl, Pontchartrain, Terrebonne, Atchafalaya, Vermilion-Teche, Mermentau, Calcasieu, Sabine



Photo by Larry Korhnak

References:

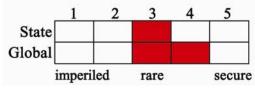
Meyer, K. D. 1995. Swallow-tailed Kite (*Elanoides forficatus*). In The Birds of North America, No. 138 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.



Alligator Snapping Turtle

Macroclemys temminckii

Rarity Rank: S3/G3G4



Identification:

- Has webbed toes, an upper jaw with a strongly hooked beak, and the eyes are positioned on the side of the head and therefore cannot be seen from above
- Three peaked heels on carapace, which is dark brown and usually has algal growth
- Five pairs of plastral scutes
- Plastron is small, narrow and cross-shaped with a long, narrow bridge

Habitat:

- May be found in swamps with rivers close by, but mainly found in large rivers, canals, lakes and oxbows
- Most commonly in freshwater lakes and bayous, but also found in coastal marshes

Food habits:

- Turtles, fishes, aquatic snails, crustaceans, clams, carrion and some plant matter
- May actively pursue prey but is also known to lie concealed, underwater and use its tongue's worm-like appendage to entice prey

Range:

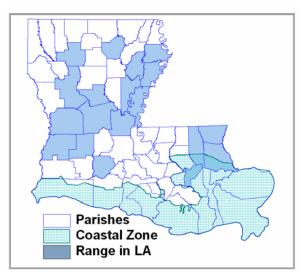
In Louisiana can be located statewide but less commonly in marshes

Reproduction:

- In southeastern LA, eggs are laid mid April to late May and from mid May to early June in northeastern areas
- May have one clutch per year or one every other year. Clutch size averages from 16 to 38
- Large, leathery eggs

Threats:

- In the past, commercial turtle harvesting and selling has depleted population size, though has since been legally banned
- Dredging disturbances to stream ecosystems



Range based on occurrences in Natural Heritage database





Beneficial Management Practices:

- Legal protection of the species due to declining populations
- Reduce dredging activities

LA River Basins:

Pearl, Pontchartrain, Barataria, Atchafalaya, Vermilion-Teche, Mermentau, Calcasieu, Sabine, Red, Ouachita



Photos from U.S. Fish and Wildlife Service



References:

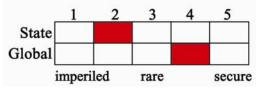
Dundee, Harold A., and Douglas A. Rossman. <u>The Amphibians and Reptiles of Louisiana</u>. Louisville: Louisiana State UP, 1996. 176-178. (Accessed: June 19, 2007).



Diamondback Terrapin

Macroclemys terrapin

Rarity Rank: S2/G4



Identification:

• Carapace is between 10 and 14 cm in length for males, 15 to 20 cm for females, and generally black or brown with yellow or orange marginal scutes that turn upward



- Concentric grooves and ridges on coastal and vertebral scutes, often with concentric dark and light markings
- Central keel of plastron with conspicuous blunt dorsal spines
- Plastron yellow, often mottled
- Skin dark but most males and some females have a noticeable black "moustache" on upper jaw

Habitat:

- Restricted to saline or brackish habitats
- Seagrass beds, marshes and estuaries (especially those bordered by mangroves) are favored habitats

Food habits:

Fish, crustaceans, mollusks, and insects

Range:

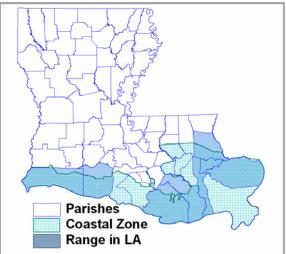
- There are seven recognized subspecies that range along the coast from Massachusetts to southern Texas or northern Mexico
- In Louisiana, barrier island marshes and seagrass beds on the bayside of the islands are important areas for the species

Reproduction:

- Females lay 4 to 12 eggs April through July
- More than one clutch may be laid annually
- Nests on mud or sand bars

Threats:

- Poor water quality (pollution)
- Human disturbance on nesting areas
- Loss of population in crab traps
- Habitat altered or lost by dredging and siltation
- Coastal land loss



Range based on occurrences in Natural Heritage database



Beneficial Management Practices:

- Reduce siltation and sedimentation
- Reduce incidental killings in crab traps
- Derelict crab trap removal

LA River Basins:

Pearl, Pontchartrain, Barataria, Terrebonne, Vermilion-Teche, Mermentau, Calcasieu, Sabine

References:

Dundee, Harold A., and Douglas A. Rossman. <u>The Amphibians and Reptiles of Louisiana</u>. Louisville: Louisiana State UP, 1996. 187.

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version

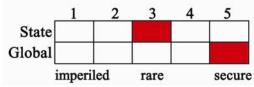
6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June. 19, 2007).



Eastern Glass Lizard

Ophisaurus ventralis





Identification:

- A snake-like lizard, which lacks legs but has moveable eyelids and external ear openings (these two characteristics serve to distinguish glass lizards from all snakes)
- Photo by Andrew Hoffman
- General body color is gray-green to green •
- Whitish or yellowish spots on posterior edge of dorsal scales result in an overall speckled appearance
- Older individuals may develop numerous longitudinal dark lines on back
- Lacks distinct dark mid-dorsal stripes and stripes below the lateral groove
- Tail is easily broken off and the regenerated tip is sharply pointed and of a different color than the body
- Adults are 1 m in total length •

Habitat:

- Very good burrowers and thus they often spend a considerable amount of time underground •
- Generally found in moist habitats and those with sandy, friable soils •

Food habits:

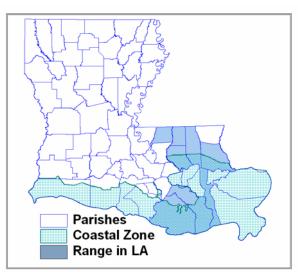
Feed on a variety of insects, snails, bird eggs, and small reptiles

Range:

- Restricted to the southeast coastal plain, from North Carolina south through Florida, west to eastern Louisiana
- In Louisiana, restricted to the Florida Parishes and the eastern coastal region

Reproduction:

- Lays eggs in spring and summer; eggs hatch in two months
- Clutch size of 6 to 17 eggs
- Females stay with eggs during development •



Range based on occurrences in Natural Heritage database





Threats:

- Urban and agricultural expansion may disturb habitats
- Coastal land loss

Beneficial Management Practices:

Actions such as periodic burning and selective cutting may aid in maintaining habitats in some instances

LA River Basins:

Pearl, Pontchartrain, Barataria, Terrebonne

References

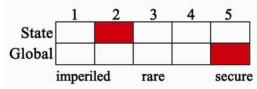
NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version 6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: Feb. 19, 2007).



Harlequin Coral Snake

Micrurus fulvius

Rarity Rank: S2/G5



Identification:

• A small-headed snake with smooth dorsal scales and anal plate divided



Photo by Jeff Boundy

- Tip of snout is black and body is red, yellow and black rings (yellow and red come into contact)
- Belly is marked in the same way as the dorsum (back)
- Extremely poisonous

Habitat:

- Primarily occurs in forested areas, though some individuals may be found in other areas such as open pastures
- Eggs are laid mostly underground or under organic matter, loose soil or leaf litter

Food habits:

Mostly snakes and lizards, but also some rodents

Range:

In Louisiana, it is found in the East Florida Parishes

Reproduction:

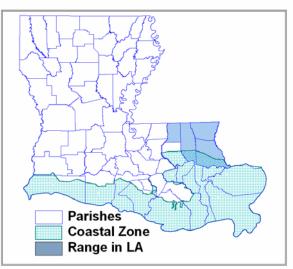
- Lay from five to nine eggs
- Mate in spring and sometimes fall
- Incubation last from 10 to 13 weeks
- Males are sexually mature in 11 to 21 months, females 21 to 27 months

Threats:

- Motorized vehicles cause habitat destruction as well as deaths
- Loss of habitat to development
- Habitat contamination from pollution and pesticides

LA River Basins:

Pearl, Pontchartrain



Range based on occurrences in Natural Heritage database





References:

Dundee, Harold A., and Douglas A. Rossman. <u>The Amphibians and Reptiles of Louisiana</u>. Louisville: Louisiana State UP, 1996. 176-178.

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version

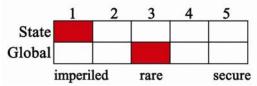
6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June. 19, 2007).



Loggerhead Sea Turtle

Caretta caretta

Rarity Rank: S1/G3



Identification:

- Reddish—brown carapace and yellowish plastron
- Other diagnostic features include 5 or more costal scutes, with the first one always touching the nuchal
- Large, block like head
- The carapace length of full-grown adults averages about 1.1 m (43.3 in) with a maximum measured length of 1.2 m (47.2 in)
- Adults may weigh more than 227 kg (500 lb)

Habitat:

- Marine open deep water, marine open shallow water (especially with submerged seagrass beds, salt marshes, bays, tidal passes, and coastal dunes (nesting))
- Loggerheads generally inhabit warm water over the continental shelf and regularly enter marshes, estuaries and coastal rivers

Food habits:

Omnivorous, feeding on aquatic plants, crustaceans, mollusks, jellyfish, squid, sea urchins and fish

Range:

- Primarily found in the warm water of the Atlantic basin but may range as far north as Canada or as far south as Argentina
- In Louisiana, this species has been found throughout the coastal region, but nesting has only been recorded on the Chandeleur Islands

Reproduction:

- Ideal nesting habitat is provided by well—drained dunes with clean sand and scattered grassy vegetation
- Females lay an average of 2 clutches (range 1-7) of 60-80 eggs per season
- Most females nest on 2 year or 3 year intervals
- Nesting in Louisiana usually occurs between May and August, with a peak in late June

Threats:

- Erosion of barrier islands on which the species nests
- Take of eggs, young, and adult turtles as food for people
- Incidental take of turtles by fishing and shrimping gear



Range based on occurrences in Natural Heritage database



Delaware Game & Fish Commission





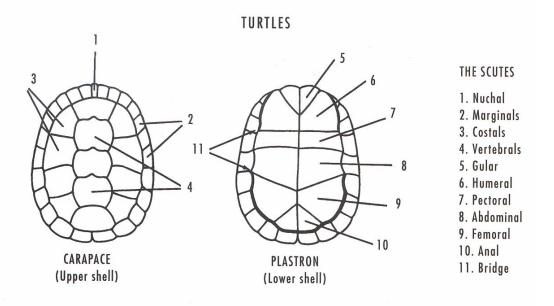
• Coastal land loss

Beneficial Management Practices:

- Protection of females, eggs and hatchlings on breeding beaches
- Use of turtle exclusion devices (TEDS) on shrimp trawls
- Reduced trawling time for shrimping

LA River Basins:

Pontchartrain, Mississippi, Barataria



Drawing from: A Field Guide to Reptiles and Amphibians of Eastern and Central North America. Third Edition, Expanded. Figure 23

Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 <u>www.BTNEP.org</u> or 1-800-259-0869

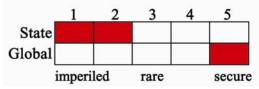




Mole Kingsnake

Lampropeltis calligaster rhombomaculata

Rarity Rank: S1S2/G5T5



Identification:

- Average of 76 to 102 cm in length
- Dorsum orange-tan, tan or medium brown with transverse red to dark brown blotches
- Crown marked by a spear-shaped mark
- Venter dull white to gray with irregular darker markings

Habitat:

- Found in thickets, woodlots, cultivated fields and occasionally back yards in suburban areas
- Those from LA found in upland longleaf pine woods and pine flatwoods

Food habits:

Lizards, small snakes, shrews, and small rodents

Range:

The coastal plains through the Fall Line hills of the Appalachians

Reproduction:

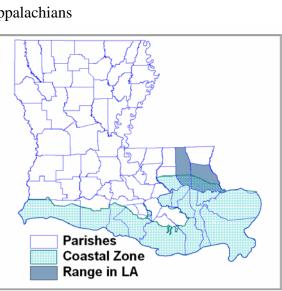
Oviparous, laying 3 to 13 (average 8) eggs

Threats:

- Vehicular traffic causes death, and may have an impact on habitat
- Agricultural and urban development reduces habitat

LA River Basins:

Pearl, Pontchartrain



Range based on occurrences in Natural Heritage database

References:

Conant, Roger, and Joseph T. Collins. <u>A Field Guide to Reptiles and Amphibians of Eastern and Central</u> <u>North America. Third Edition, Expanded.</u> Houghton Mifflin Company, 1998. 376-377.

Palmer, William, Alvin Braswell. 1995. Reptiles of North Carolina. University of North Carolina Press, Chapel Hill: 179-182.



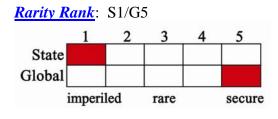
Image © Suzanne L. Collins, CNAH





Ornate Box Turtle

Terrapene ornata



Identification:

- 4 to 6 inches in total length
- Domed carapace with flat top, smooth edges, patterned with wide, yellow stripes radiating outwards
- The plastron has a divided gular scute, with a hinge between abdominal and pectoral scutes, thus forming two movable lobes capable of enclosing the entire body within the shell
- The plastron is a dark brown with a pattern of yellow lines
- Tail is short and each hind foot has four claws
- Males have red iris and females have yellow or brown iris

Taxonomic comments:

The subspecies found in Louisiana is Terrapene ornata ornata

Habitat:

- Open areas dominated by grasses and brushy vegetation such as prairies, grasslands, and sandy plains
- Occasionally found in forests

Food habits:

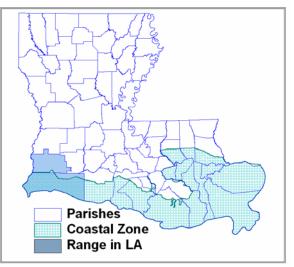
Beetles, caterpillars, grasshoppers, some carrion and berries as available

Range:

Found throughout Midwestern states including Indiana, Iowa, Wisconsin, southward through Texas and the eastern edge of Louisiana to the Gulf Coast

Reproduction:

- Males are mature at 7 years and females mature at 8 years of age
- These turtles typically mate in early spring
- Between May and July females dig nests in which to burry their eggs at dusk in open, dry areas
- Females dig a hole and bury the eggs (2 to 8 eggs), the young dig themselves out in October, after hatching



Range based on occurrences in Natural Heritage database





Threats:

- Individuals are being collected for the pet trade in the U.S. and exported to other countries
- Mortality caused by habitat destruction, pesticides, and vehicular and lawn mower collisions

Beneficial Management Practices:

- Prevent conversion of existing grassland habitat to other land uses
- Use of growing season prescribed fire (April to June) at a frequency of every 1 to 2 years
- Remove any invasive plant species with use of spot herbicides or mechanical means
- Prohibit livestock overgrazing

LA River Basins:

Mermentau, Calcasieu, Sabine

References:

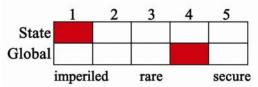
- Conant, R. and J. T. Collins. 1991. A Field Guide to Reptiles and Amphibians: Eastern and Central North America. Houghton Mifflin Company, Boston, Massachusetts.
- Dundee, H. A., and D. A. Rossman. 1989. The Amphibians and Reptiles of Louisiana. Louisiana State University Press, Baton Rouge, Louisiana.
- Ernst, C.H., J.E. Lovich, and R.W. Barbour. 1994. Turtles of the United States. Smithsonian Institution Press, Washington D.C.
- Wilson, L. A. 1995. Land Manager's Guide to the Amphibians and Reptiles of the South. Nature Conservancy, Chapel Hill, North Carolina.



Pine Woods Snake

Rhadinaea flavilata

Rarity Rank: S1/G4



Identification:

- A slender snake
- Back golden brown to reddish brown
- Belly white, yellow or yellow green
- Head is dark and often with a narrow, dark stripe through the eye
- Lips are white or yellow
- Adults from 10 to 13 inches long and young from 5.5 to 6.5 inches at hatching

Habitat:

Can be found in or under logs, leaves, or soils in coastal pine flatwoods and bottomland hardwood forests

Food habits:

- Frogs, lizard, small salamanders, and small snakes
- Has slightly venomous saliva that it uses to capture food
- Upon capturing food, the snake partially swallows the prey so that it can use the fangs in the back of its mouth to inject a slightly venomous saliva and remains still until the prey item ceases to move

Range:

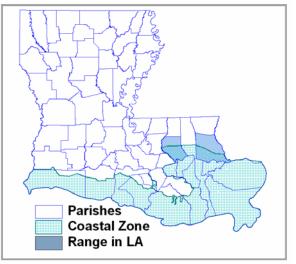
Found along the Atlantic and Gulf coast from North Carolina to Louisiana

Reproduction:

- Pairs mate in the late winter/ early spring
- Females lay clutches of 2 to 4, yellowish-white, leathery eggs in rotting logs between June and August
- Young hatch in September

Threats:

- Land use conversion and habitat destruction
- Fire suppression



Range based on occurrences in Natural Heritage database

Photo by Jeff Boundy



Beneficial Management Practices:

- Prevent conversion of existing natural forests to other land uses
- Use of growing season prescribed fire (April-June) at a frequency of every 5 to 10 years
- No logging during wet periods when the soil is saturated
- No bedding or other soil disturbance that may alter natural water flow patterns
- Prohibit off-road vehicle use, or restrict use to pre-existing trails
- Remove any invasive exotic plant species with use of spot herbicides or mechanical means

LA River Basins:

Pearl, Pontchartrain

References:

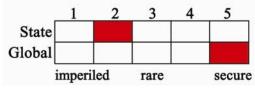
- Conant, R. and J. T. Collins. 1991. A field guide to reptiles and amphibians: Eastern and Central North America. Houghton Mifflin Company, Boston, Massachusetts.
- Dundee, H. A., and D. A. Roosman. 1996. The amphibians and reptiles of Louisiana. Louisiana State University Press, Baton Rouge, Louisiana.
- Ernst, C.H. and R.W. Barbour. 1989. Snakes of Eastern North America. George Mason University Press, Farifax, Virginia.
- Wilson, L. A. 1995. Land manager's guide to the amphibians and reptiles of the south. Nature Conservancy, Chapel Hill, North Carolina.



Rainbow Snake

Farancia erytrogramma

Rarity Rank: S2/G5



Identification:

- An iridescent, glossy snake with red and black stripes on its dorsal surface
- Ventral side is mostly yellow with a central reddish stripe and bordered by round black dots
- Black spots are also on chin and neck
- Scales smooth, anal scale divided •
- Adults can be about 3 to 5.5 ft (1 to 1.6 m) in total length •

Habitat:

Usually found in or near water, especially cool, clear streams with sand or gravel bottoms

Food habits:

Feeds on eels, frogs, and salamanders

Range:

- Found throughout the Atlantic and Gulf coastal plains from Maryland to central Florida, west to eastern Louisiana
- In Louisiana, restricted to the Florida Parishes •

Reproduction:

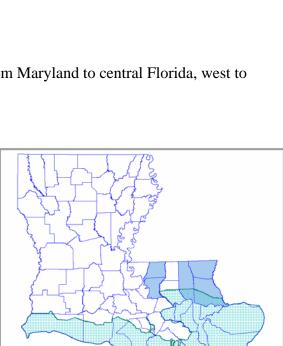
- Between 22 to 52 eggs per "nest" (FL report) •
- Nests are subsurface, in sandy soils
- Laying is in early or mid July and hatching is in early September
- To get to the surface, the hatchlings must burrow • through the sandy soil

Threats:

- Deaths caused by vehicular traffic •
- Habitat degradation and alteration from practices • such as wetland drainage and human development

Beneficial Management Practices:

Species and habitat protection through state parks or refuges



Range based on occurrences in Natural Heritage database

Parishes

Coastal Zone Range in LA





LA River Basins:

Pearl, Pontchartrain

References:

Dundee, Harold A., and Douglas A. Rossman. <u>The Amphibians and Reptiles of Louisiana</u>. Louisville: Louisiana State UP, 1996. 234-235.

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version

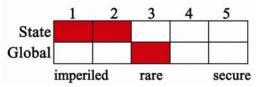
6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June. 19, 2007).



Gulf Sturgeon

Acipenser oxyrinchus desotoi

Rarity Rank: S1S2/G3T2



Identification:

- Large, primitive, relatively stocky, cylindrical fish
- Head elongated and wedge-shaped
- Four fleshy barbels in front of the mouth, which are positioned on the underside of the head
- Five rows of bony plates on each side with a prominent dorsal ridge
- Tail fin 2-lobed, with upper lobe longest
- Spiracle above each eye
- Light to dark brown above, pale below
- Adult specimens range between 1.8 to 2.4 m total length and may weigh as much as 100 kg

Habitat:

All saltwater habitats, except during the spawning season when it is found in major rivers that empty into the Gulf of Mexico

Food habits:

Bottom feeders and primary prey items include insects, crustaceans, mollusks, annelids (worms), and small fishes

Range:

- This species consists of 2 recognized subspecies, *A. o. oxyrinchus*, which ranges from Labrador to northeastern Florida, and *A. o. desotoi*, which is found from the Mississippi River delta east to Suwannee River, Florida
- In Louisiana, most records of the Gulf sturgeon have been in the Pearl, Bogue Chitto and Tchefuncte rivers in St. Tammany and Washington parishes, although it is likely to be found in any large river in the Lake Pontchartrain drainage

Reproduction:

- Species is anadromus, meaning it breeds in fresh water, then returns to salt water
- Mature between 10 and 28 years of age and may live up to 60 years
- Spawning occurs between late winter and early spring in major rivers
- A female may lay as many as 25 million eggs during the spawning season



Range based on occurrences in Natural Heritage database



U. S. Fish & Wildlife Service



• Young descend to the Gulf at about 4 years of age and may wander up to 1500 km from the natal stream (place where born) before returning to spawn

Threats:

- Incidental catch in trammel and gill nets may be the single most important threat
- Harvest of adults for meat and eggs (caviar) has been the principle cause of the decline
- Habitat alteration, especially the construction of dams, which limits access to the spawning areas
- Continued modification of rivers by constructing dams or dredging, which affects habitat quality and availability

Beneficial Management Practices:

- Currently protected from harvest throughout its range
- River modification must take into account effects on sturgeon
- The use of TEDS (turtle exclusion devices) on shrimp trawls may reduce incidental catch
- Studies are underway to determine the status, distribution and movements of this species in Louisiana

LA River Basins:

Pearl, Pontchartrain

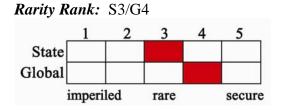


U.S. Fish and Wildlife Service



Paddlefish

Polyodon spathula





Identification:

- One of the most distinctive freshwater fishes in North America
- Possesses several primitive features including a cartilaginous skeleton, a heterocercal tail and spiracles
- Elongate, spatulate snout, which is dorso-ventrally flattened and longer than the rest of the head
- Small imbedded scales, an elongate operculum, and relatively small eyes
- Adult weight may reach 45 kg, and length to 1.5 m

Habitat:

- Usually found in large, free-flowing rivers but is frequently found in impoundments
- Spawns in shallow, fast moving waters above gravel bars

Food habits:

Exclusively on zooplankton

Range:

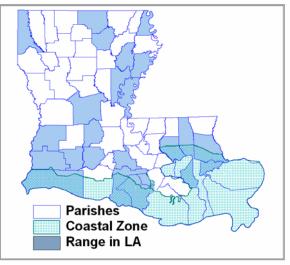
- Formerly found throughout the Mississippi River and Great Lakes drainages but now restricted to the Mississippi River drainage and apparently declining in the periphery of its range
- In Louisiana, this species is probably found throughout most of the major river systems and in larger impoundments

Reproduction:

- Need streams in order to spawn
- Life expectancy is 15 years (though individuals known to live 30 or more)
- Males reach sexual maturity in 7 years, females 9 to 10
- Spawns in early spring during high water; Preferred temperatures around 10 to 15 °C
- Eggs hatch in about 9 days

Threats:

- Habitat alteration through actions such as river modification and the construction and operation of dams
- Pollution as well as fertilizer and pesticide runoff
- Siltation of spawning habitats from soil erosion



Range based on occurrences in Natural Heritage database



• Harvesting has in the past caused a decrease in population

Beneficial Management Practices:

- Several states have already established regulations on harvesting
- Prevent destruction of spawning habitats
- Limit the number of dams which prevent migratory movement as well as moving water for spawning

LA River Basins:

Atchafalaya, Calcasieu, Mermentau, Mississippi, Ouachita, Pearl, Pontchartrain, Red, Vermilion-Teche

References:

NatureServe. 2006. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: June 21, 2007).

Native Fish in the Classroom Project – An Aquaculture Stewardship Project

www.lamer.lsu.edu/projects/nativefish/index.htm

Native Fish in the Classroom is a multi-disciplinary classroom-based stewardship project for intermediate and middle school students. The overall goal of the *Native Fish in the Classroom Project* is to assist students in developing an attitude of stewardship toward our natural resources and to provide for them a constructive active learning situation in which they can explore strategies for sustaining our aquatic ecosystems. The following objectives support this goal:

- (1) Provide intermediate and middle school students with background information on fisheries management, fish biology, protected species information and aquatic natural resources.
- (2) Maintain a classroom-based nursery aquarium in which students will grow native Louisiana fish (paddlefish) from egg to fingerlings.
- (3) Produce native paddlefish that can be used by the Louisiana Department of Wildlife and Fisheries' Booker Fowler Fish Hatchery to help manage a protected fish species population in Louisiana.

Expected Benefits.

Louisiana students will obtain hands-on, real-science knowledge of the state's native aquatic resources.

Louisiana teachers will gain access to the state's Booker Fowler Fish Hatchery as an outdoor education classroom. Participating teachers attend workshops where they build their classroom nursery tank, learn about water quality parameters and receive the Native Fish in the Classroom Teacher Guidebook.

Primary Contact:

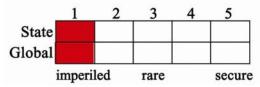
Angela Capello, Biologist Supervisor LDWF Booker Fowler Fish Hatchery Phone: 318/ 748-6999



Pallid Sturgeon

Scaphirhynchus albus

Rarity Rank: S1/G1





Identification:

- Relatively large, cylindrical fish with shovel-shaped head and slender tail base
- Tail fin 2-lobed with top lobe larger than bottom, terminating in a long filament
- Mouth is placed on the underside of the head and is preceded by several fleshy barbels
- Can be separated from the similar and more common shovelnose sturgeon (*S. platorhynchus*) by the absence of bony plates on the belly
- Grayish-white above and white below
- Adults typically range between 19.5 and 31.2 inches in length and up to 65 lb in weight
- The pallid sturgeon is one of the most poorly known and infrequently recorded freshwater fishes in North America

Habitat:

- Large rivers in Southeast United States
- The species apparently prefers the main channels of excessively turbid rivers in areas with strong currents over firm sandy bottom

Food habits:

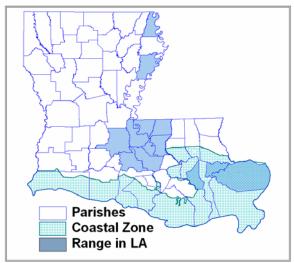
Aquatic insects and small fishes comprise a majority of the diet

Range:

- AR, IA, IL, KS, KY, LA, MO, MS, MT, ND, NE, SD, TN
- Almost entirely restricted to the Missouri and lower Mississippi rivers
- In Louisiana, this species was formerly thought to be restricted to the main channel of the Mississippi River; however, recent data indicate that the species also exists in the Atchafalaya River

Reproduction:

• Spawning takes place in the spring or early summer



Range based on occurrences in Natural Heritage database



Threats:

- Channelization of rivers and construction of reservoirs eliminates spawning habitat, blocks access to remaining spawning sites and alters prey availability
- Man-caused changes in habitat and water quality have apparently greatly reduced successful reproduction in recent years
- Interbreeding with shovelnose sturgeons

Beneficial Management Practices:

- Protect from harvest
- Little is known about the life history of this species, research would be beneficial

LA River Basins:

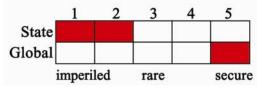
Atchafalaya, Mississippi, Pontchartrain,



Big Brown Bat

Eptesicus fuscus

Rarity Rank: S1S2/G5



Identification:

- A large bat with soft, lax fur of about one half inch
- Coloring ranges from amber browns to grayish or yellowish browns
- Under parts are lighter and may be more pinkish or olive buff
- Ears are short, black and hairless

Habitat:

- Can be found in cities and other semi-open habitats and also wooded areas, especially deciduous forests
- Generally roosts in buildings in the summer as well as hollow trees, under bridges, attics, barns and sewers
- Prefers a cooler roosting site than many other bats

Food habits:

- Feeds on flying insects such as beetles
- Average distance traveled in order to forage is 1 to 2 km

Range:

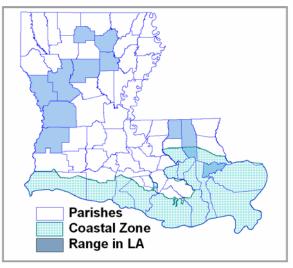
- Throughout the United States, and from southern Canada to British Columbia and south to Baja California
- Also found in most of Mexico and Central America to Panama, eastward to Florida and the Atlantic Coast

Reproduction:

- Mates throughout summer into fall
- Young are born May through July
- Litter size is usually 1 but sometimes 2
- Young are able to fly at 4 to 5 weeks
- A nursery colony is seldom more than a few 100 individuals

Threats:

- Lighting of roost areas
- Habitat reduction
- Human fear of bats resulting in bat mortality or roost destruction



Range based on occurrences in Natural Heritage database



Photo by G. L. Twiest



Beneficial Management Practices:

- Educate the public on general bat habits and beneficial behavior
- Maintain habitats where bats are known to reside

LA River Basins:

Pontchartrain, Calcasieu, Sabine, Red, Ouachita (known occurrences), generally found statewide



Photo by Dr. Paul Leberg Big Brown Bat roosting under a bridge

References:

Lowery, Jr., George H. <u>The Mammals of Louisiana and Its Adjacent Waters</u>. Kingsport: Kingsport P, Inc., 1974. 110-113.

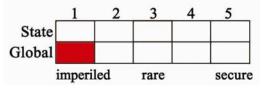
NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version 6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June 20, 2007).

Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or 225-765-2811



Canis rufus

<u>Rarity Rank:</u>SX/G1Q (extinct in LA)



Identification:

- Dorsal pelage mostly gray with black and sometimes yellowish or reddish hairs on legs and underparts
- Muzzle, ears and nape are tawny
- Nose pad over 25 mm wide
- Total length from 135 to 165 cm
- Larger than coyote and smaller than the Gray wolf

Habitat:

- Includes upland and lowland forest, shrubland, river bottoms, coastal prairies and marshes
- Areas with vegetative cover

Food habits:

Opportunistic, though mainly small mammals and birds

Range:

Extirpated from its historical range with the exception of the Carolina's

Reproduction:

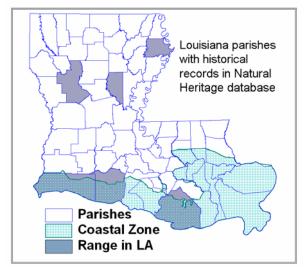
- Mate in January and February
- 4 to 7 pups born in April and May
- sexually mature at 3 years

Threats:

- Historically threatened by human trapping and poisoning, resulting in population decline
- Habitat loss
- Hybridization with coyotes

LA River Basins:

Terrebonne, Vermilion-Teche, Mermentau, Calcasieu, Sabine, Red, Ouachita (known occurrences from LNHP database), historically found statewide



Range based on occurrences in Natural Heritage database





U.S Fish and Wildlife Service





U. S. Fish and Wildlife Service

References:

Lowery, George H. The Mammals of Louisiana and Its Adjacent Waters. Louisiana State UP, 1974.

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version

6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer.

Burt, William H. <u>A Field Guide to the Mammals North America North of Mexico</u>. 3rd ed. Boston: Houghton Mifflin Company, 1980.

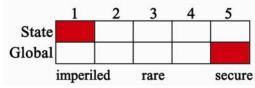




Eastern Spotted Skunk

Spilogale putorius

Rarity Rank: S1/G5



Identification:

- Relatively small skunk with jet-black pelage
- Identifiable by white markings including 4 pairs of streaks as well as spotty marks on top of the head, chin, back and rump and sides of tail
- Tail has white tip

Habitat:

- Forested and well covered areas are preferred, including open or brushy areas and prairie outcrops
- Dens are protected sites and can be burrows abandoned by other mammals, under brush piles, in hollow logs, and under buildings

Food habits:

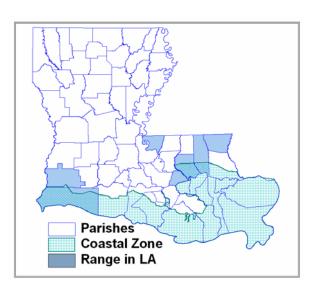
- A variety and plants and animals
- Animals may include insects such as grasshoppers and beetles, frogs, crawfish and even occasional small birds and eggs
- Fruits and corn are some of the plants that are eaten

Range:

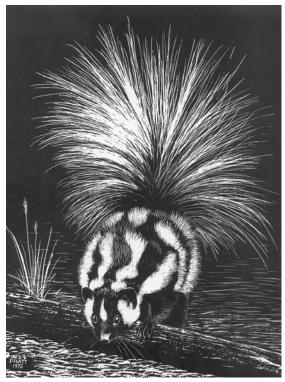
- A patchy distribution ranging as far north as southern British Columbia and northern Idaho, South Dakota, Minnesota, Kentucky, West Virginia, and parts of Pennsylvania. Also, as far south as Costa Rica
- Excluded in the Atlantic Coastal Plain, West Sonora, and Central America

Reproduction:

- Known to mate in the winter
- Average litter size is 4 but can be up to 9
- One litter per year and young are born between April and July
- Weaning takes about 8 weeks and offspring are sexually mature by 9 to 10 months



Range based on occurrences in Natural Heritage database



Spilogale putorius from Lowery, 1972, <u>The</u> <u>Mammals of Louisiana and Its Adjacent Waters</u>, pg 434; Portrait by H. Douglas Pratt, 1972.



Threats:

- Vehicular collisions may be a danger
- Habitat fragmentation and destruction
- Lack of tolerance by human population

Beneficial Management Practices:

- Educate population on beneficial aspects of skunks and general habits
- Maintain populations through habitat preservation and reformation

LA River Basins:

Pearl, Pontchartrain, Mississippi, Mermentau, Calcasieu, Sabine

References:

Lowery, Jr., George H. <u>The Mammals of Louisiana and Its Adjacent Waters</u>. Kingsport: Kingsport P, Inc., 1974. 423-427.

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version

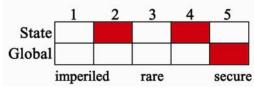
6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June 20, 2007).



Long-tailed Weasel

Mustela frenata

Rarity Rank: S2S4/G5



Identification:

- Body is small and long with short legs and long tail
- Upperparts are brown with yellowish to yellowishwhite underneath and chin is white
- The tip of the tail is black which continues for about one-third of its length
- Hair is moderately fine and relatively short

Habitat:

- Usually near water, though live in a wide variety of habitats including brushland, and open areas such as woodlands, marshes, swamps, field edges and riparian (bank) grasslands
- Den locations may include burrows that have been abandoned by other species, brush piles, hollow stumps and among tree roots

Food habits:

Feeds mainly on small mammals, also birds, insects or other small invertebrates

Range:

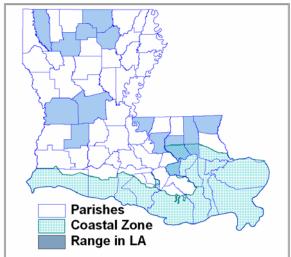
- Located in southern Canada to Peru
- Throughout United States and Mexico with the exception of a small area in the southwestern region
- Species is highly local in Louisiana

Reproduction:

- Breeds in July through August
- Litter size average is from 4 to 7 but can have up to 12
- Young will disperse after 11 to 12 weeks
- Males reach sexual maturity in one year

Threats:

- Agriculture development and monoculture farming
- Wetland drainage
- Pesticide use



Range based on occurrences in Natural Heritage database



Photo by Emlyn Smith





Beneficial Management Practices:

Maintenance of landscape connectivity during development or when being used for agriculture due to the species' sensitivity to habitat fragmentation

LA River Basins:

Pearl, Pontchartrain, Mississippi, Barataria, Vermilion-Teche, Mermentau, Calcasieu, Sabine, Red River, Ouachita



Photo by Chris Melder

References:

Lowery, Jr., George H. <u>The Mammals of Louisiana and Its Adjacent Waters</u>. Kingsport: Kingsport P, Inc., 1974. 423.

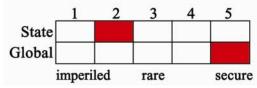
NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version 6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June 21, 2007).



Louisiana Black Bear

Ursus americanus luteolus

Rarity Rank: S2/G5T2



Identification:

- Large, shy, bulky
- Head is rather large and rather blunt in profile, eyes relatively small, nose pad broad
- Tail is very short and inconspicuous
- The dense fur is black and a whitish patch may be present on the chest
- Track pattern distinctive, almost human-like; front prints about 12 cm long and 8 cm wide, back prints 17 cm long and 7 cm wide
- The outside toe print is generally larger than the other four and the claw prints are usually obvious
- Usually solitary except when in family unit of mother and cubs

Habitat:

- Primarily restricted to large tracts of heavily wooded bottomland hardwoods and swamps
- Dens in large tree cavities, slash piles, thickets, or thick vegetation during the winter

Food habits:

Bears are omnivores, although most of diet is hard mast, fruits, berries and other vegetation

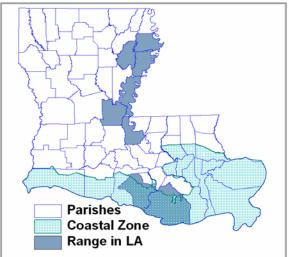
Range:

Formerly numerous and found throughout Louisiana, though currently there are only three sub populations in existence:

- 1. Northeastern Louisiana in the vicinity of Tensas River National Wildlife Refuge,
- 2. Northeastern Atchafalaya Basin in Pointe Coupee parish
- 3. Southern Atchafalaya River Basin (primarily St. Mary Parish)

Reproduction:

- Females produce 1 to 5 cubs (average of 2) every other year in January or February
- Cubs emerge from the den in spring and remain with the mother for about 17 months, including their first winter
- Females are sexually mature at 3 to 5 years
- Reproductive success decreases with lack of food



Range based on occurrences in Natural Heritage database



Photo: Black Bear Conservation Committee





Threats:

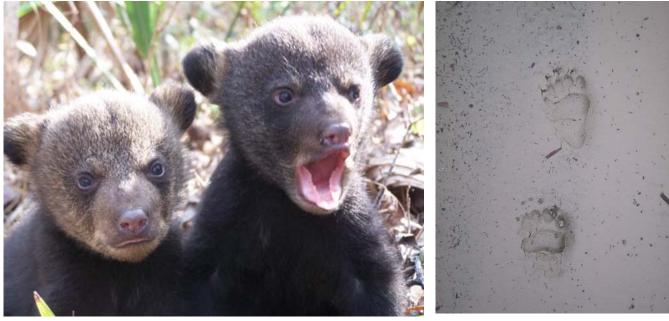
Habitat loss and degradation due to agricultural, industrial and residential development and poaching

Beneficial Management Practices:

- Habitat restoration is necessary
- Timber management practices that produce maximum diversity

LA River Basins:

Terrebonne, Atchafalaya, Vermilion-Teche, Ouachita



Black Bear Cubs

Photos: Black Bear Conservation Committee

Black Bear tracks

References:

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version

6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June 20, 2007).



Manatee

Trichechus manatus

Rarity Rank: SZN/G2



Identification:

- Large, docile, barrel-shaped aquatic mammal
- Head small, flattened in profile
- Upper jaw extends beyond lower jaw, nostrils placed on top of snout, with stiff bristles around mouth
- Lacks external ears
- Front limbs modified into rounded flippers that are much more flexible than those of cetaceans
- Hind limbs absent
- Tail large, spatula-shaped. Adults may reach 4 m (13 ft) and 1,000 kg (2,205 lb)
- Generally restricted to rivers and estuaries although manatees may enter salt water when traveling from site to site
- Found in waters with dense submerged aquatic beds or floating vegetation
- Herbivorous; eats a variety of aquatic plants

Habitat:

- Marine open water, bays, and rivers
- Generally restricted to rivers and estuaries although manatees may enter salt water when traveling from site to site
- Often found in waters with submerged aquatic beds or floating vegetation

Food habits:

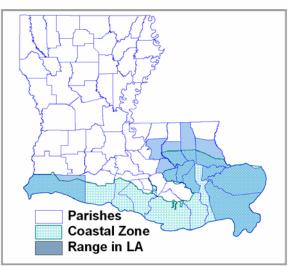
The manatee is herbivorous and eats a variety of aquatic plants

Range:

- FL, GA, LA, MS, NC, SC
- Found along the nothern Atlantic coast of South America, the Caribbean coast of South and Central America, and the Greater Antilles north of Florida

Reproduction:

- Males reach reproductive maturity between 9 and 10 years but are able to mate at 2 years
- Females can reproduce at 4 or 5 years but are most successful after 7 to 9 years
- Calves remain with mothers for 2 years
- For the most part one calf is born at a time though twins have been reported
- Calves can consume plants after 3 weeks



Range based on occurrences in Natural Heritage database





Threats:

- Collisions with boats and barges
- Death due to flood-control structures
- Poaching and vandalism
- Habitat loss
- Pollution
- Harassment by boaters and divers
- Natural factors such as unusually cold weather and outbreaks of red tide may also influence population levels.

Beneficial Management Practices:

- Public education programs
- Protection against harassment
- Enforcing no wake zones in areas with manatees

LA River Basins:

Pearl, Pontchartrain, Barataria, Mermentau, Calcasieu, Sabine



U.S. Fish and Wildlife Service

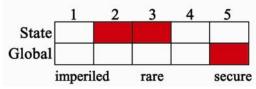
Funding provided by the Louisiana Department of Wildlife and Fisheries and the Barataria-Terrebonne National Estuary Program For more information, please visit our Web pages at <u>www.wlf.louisiana.gov/experience/naturalheritage</u> or call 225-765-2811 <u>www.BTNEP.org</u> or 1-800-259-0869



Southeastern Shrew

Sorex longirostris

Rarity Rank: S2S3/G5



Identification:

• Smallish shrew, with a sharply pointed snout, beady eyes and small ears that are nearly hidden



Photo Credit: Roger W. Barbour http://www.mnh.si.edu/mna/main.cfm

- Can be distinguished from other similar species by the third unicuspid tooth being smaller than the fourth
- Brown colored above, paler below
- Long tail and feet with weak, slender claws

Habitat:

- Prefers moist or wet areas in damp forests or bordering swamps, marshes and rivers but also can be found in upland shrubby or wooded habitats
- Usually resides underground or beneath heavy ground cover

Food habits:

Some vegetative material and a variety of small invertebrates including spiders, caterpillars, snails, crickets and beetles

Range:

Occurs mostly in southeastern United States, from Maryland, Kentucky, and Illinois south to central Florida and southeastern Louisiana

Reproduction:

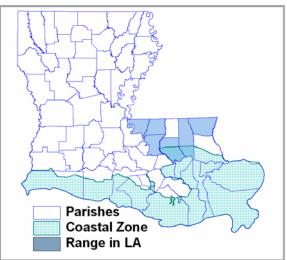
- Young are born in April through October
- Litter size is from one to six, the average is four
- One to three litters per year

Threats:

Habitat loss and changes do to human encroachment

LA River Basins:

Mississippi, Pearl, Pontchartrain



Range based on occurrences in Natural Heritage database



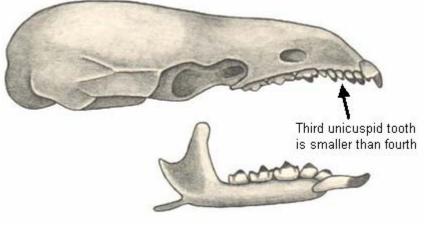


Photo Credit: Alicia V. Linzey http://www.mnh.si.edu/mna/main.cfm

References:

Lowery, Jr., George H. <u>The Mammals of Louisiana and Its Adjacent Waters</u>. Kingsport: Kingsport P, Inc., 1974. 73-74.

NatureServe Explorer: An online encyclopedia of life [web application]. 2006. Version 6.1 . Arlington, Virginia, USA: NatureServe. Available: http://www.natureserve.org/explorer. (Accessed: June 21, 2007).

"North American Mammals." <u>Smithsonian National Museum of Natural History</u>. Smithsonian Institution. http://www.mnh.si.edu/mna/main.cfm>.