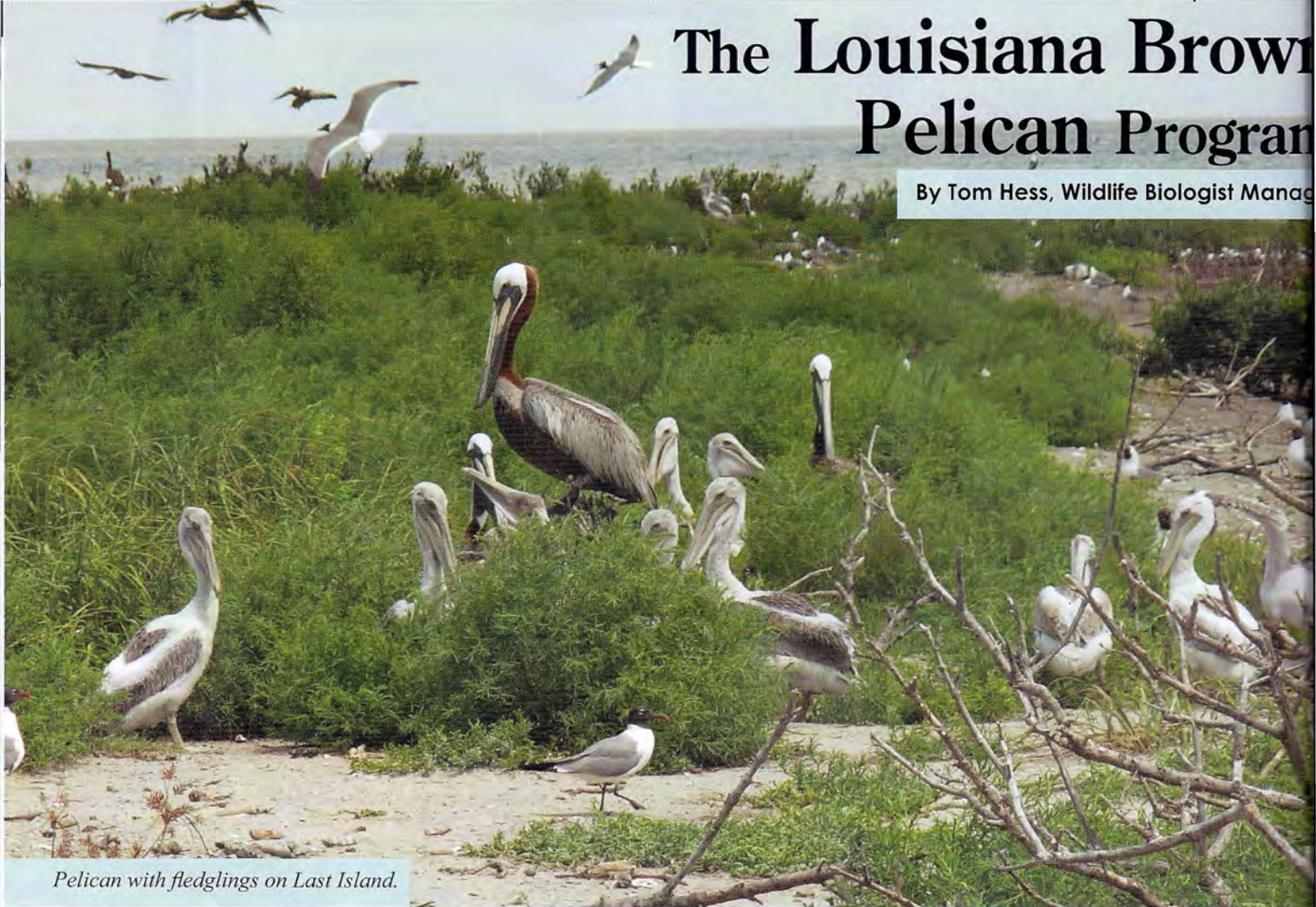


The Louisiana Brown Pelican Program

By Tom Hess, Wildlife Biologist Manager



Pelican with fledglings on Last Island.

The brown pelican has always been considered a revered bird and wonder of nature throughout the history of the United States. William Claiborne, the first governor of Louisiana Territories after the Louisiana Purchase of 1803, suggested that the brown pelican appear on Louisiana's state seal. Brown pelicans were known to be common residents along Louisiana's coastal beach zone before 1900. However, population estimates varied greatly. In 1919, the Louisiana brown pelican population was estimated at 50,000 birds. Other estimates prior to 1930 ranged from 12,000 to 85,000 birds. The largest nesting colonies occurred from the Timbalier Island Chain to the Northern Chandeleur Islands (*Figure 1*).

The Louisiana brown pelican population began declining in the late 1950s. Nesting stopped in the state in 1961, followed by their disappearance from the state in 1963. The last nesting colony was located on North Island at the north end of the Chandeleur Chain. Louisiana's brown pelican population extirpation was initially believed to be a result of a reduction in food from insecticide poisoning. However, after a severe die-off in 1975, Louisiana Department of Wildlife and Fisheries (LDWF) personnel and contaminant specialists lat-

er documented the extreme sensitivity of brown pelicans to endrin contamination (a DDT analog formerly used in insecticides).

LDWF and the Florida Game and Fresh Water Fish Commission began a brown pelican restocking program in 1968. Ted Joanen and Larry McNease (retired LDWF biologists), along with Dr. Leslie Glasgow, a Louisiana State University wildlife professor, played a pivotal role in getting the project started. From 1968 to 1980, 1,276 brown pelican hatchlings ranging from 8-10 weeks old, were transported from Florida nesting colonies to Grand Terre Island, Isle aux Pitre and North Island, and Louisiana's brown pelican population has grown exponentially since then. Between 1971 and 2007 the number of active nesting colonies ranged from four to 15, with the average number of fledglings produced per colony per year ranging from 38 to 7,680, but nest success and production varies due to weather conditions during the nesting season (March - September) (*Table 1*).

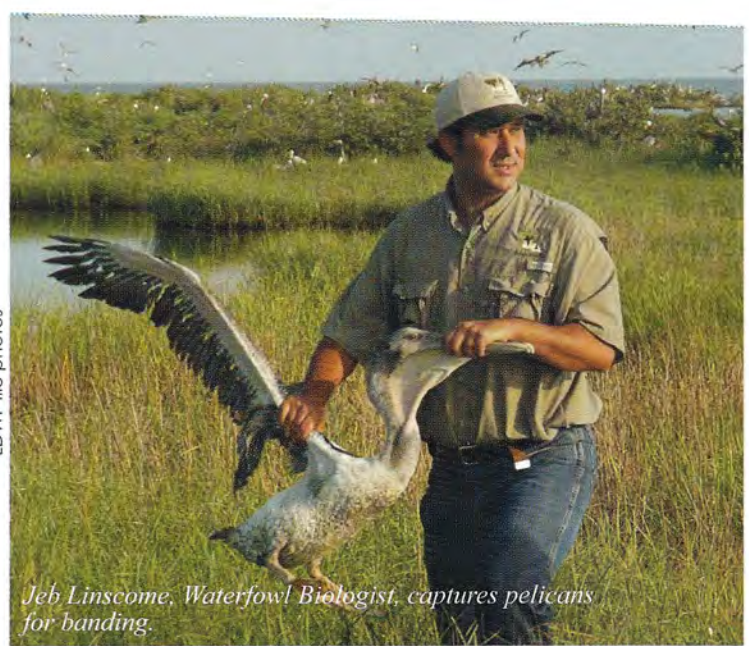
Larry McNease documented the detrimental effects of tidal flooding associated with storms on brown pelican productivity. McNease stated that, "Island habitat degradation is a chronic factor which has adversely impacted nesting since the first egg

was laid in 1971." In 2005, tropical storm Arlene, followed by hurricanes Cindy, Dennis, Emily, Katrina and Rita reduced all brown pelican nesting colonies. Hurricanes Katrina and Rita severely eroded and degraded nesting colony sites from Last Island in Terrebonne Parish to North Island in St. Bernard Parish. Amy Sallenger, a USGS oceanographer, reported areas within the Chandeleur Islands previously 18 feet above sea level, were so greatly impacted after Hurricane Katrina, that no area rose above six feet. The entire Chandeleur land mass was reduced by 90 percent.

The United States Fish and Wildlife Service (USFWS) received special congressional appropriations in response to the 2005 hurricanes. After developing several grant proposals for hurricane impact related projects, LDWF received \$200,000 for a multi-year brown pelican research-translocation project. This project, which began in 2007, had three primary objectives. The first was to gain additional information on the basic life history of Louisiana brown pelicans. Second was to continue banding efforts to track brown pelican movements. The third objective was to translocate brown pelicans to un-colonized islands in an attempt to distribute colonies across a wider geographic



LDWF file photos



area. Between 1984 and 1986, LDWF relocated 149 brown pelican fledglings from Queen Bess Island to Last (Raccoon) Island. As a result of this relocation project, there have been 102,172 fledglings produced between 1988 and 2007 on Last Island. These efforts promote brown pelican conservation efforts by distributing sub-populations more widely, rendering the entire Louisiana population less vulnerable to extirpation in the event of future storms.

In 2007, a new collaborative research project between the University of Louisiana at Lafayette, LDWF and USFWS began. Since then, over 300 young pelicans have been moved from Last Island to Whiskey Island, approximately 1,500 birds have been banded, and extensive habitat and nesting observations have been made.

The brown pelican is scheduled to be removed from the endangered species list in the near future. Monitoring data, such as provided in Table 1, have been important components of this process and will continue to be following the delisting. Between 1993 and 2008 a helicopter has been used to monitor and survey brown pelicans and other sea birds along the Louisiana coast. The data were used to detect population changes from high tides, tropical storms, hurricanes and oil spills.

Even though brown pelicans generally practice nest site fidelity, recent aerial surveys indicate new colonies developing through natural expansion. This discovery illustrates the importance of monitoring. LDWF has spent over 40 years reestablishing and managing Louisiana's state bird and will continue to do so in the future. ■

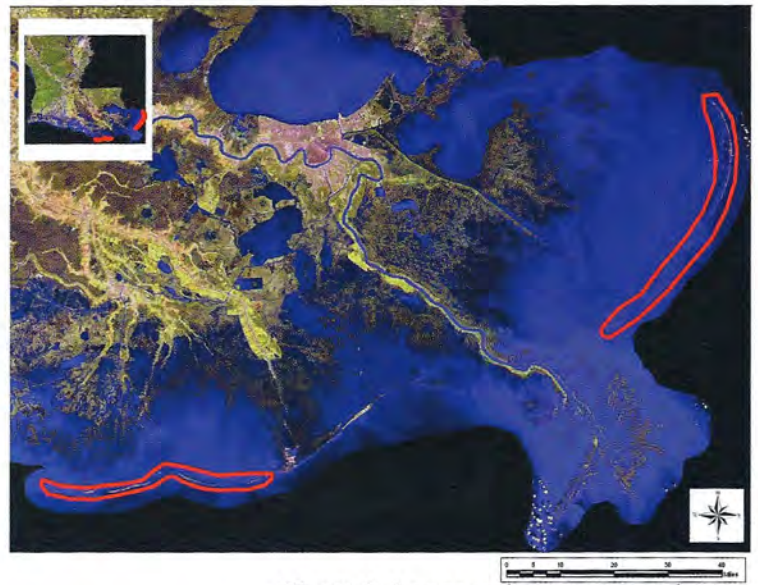


Figure 1. Largest pelican nesting colonies

Table 1. Louisiana Brown Pelican data for 11 colonies from 1971-2007

| Colony | Years Active | Colony Start | Colony End | Total # Fledglings Produced per Colony | Avg. # Fledglings per Colony per Year | Colony Size (acres) | Avg. # Fledglings Produced per Acre per Year | Avg. # Fledglings Produced per Nest | Translocation Site | Natural Colony Expansion |
|-----------------------|--------------|--------------|------------|--|---------------------------------------|---------------------|--|-------------------------------------|--------------------|--------------------------|
| Queen Bess | 37 | 1971 | Active | 53,473 | 1,445 | 35 | 41 | 1.4 | Yes | |
| Last (Raccoon) Island | 20 | 1987 | Active | 102,172 | 5,109 | 120 | 43 | 1.7 | Yes | |
| Shallow Bayou | 4 | 2004 | Active | 9,156 | 2,289 | 15 | 153 | 2.4 | | Yes |
| Wine Island | 7 | 2001 | Active | 1,996 | 285 | 35 | 57 | 1.6 | | Yes |
| Baptiste Collette | 8 | 2000 | Active | 39,850 | 4,981 | 30 | 166 | 1 | | Yes |
| West Breton* | 4 | 2002 | 2005 | 30,720 | 7,680 | 65 | 118 | 1.7 | | Yes |
| Pelican Point | 8 | 2000 | Active | 3,340 | 418 | 40 | 10 | 1.5 | | Yes |
| North Island | 28 | 1979 | Active | 26,813 | 958 | 270 | 4 | 1.5 | Yes | |
| Brush Island | 4 | 2003 | Active | 615 | 154 | 75 | 2 | 1 | | Yes |
| Mitchell Island* | 6 | 1998 | 2003 | 225 | 38 | 12 | 3 | 1.1 | | Yes |
| Marlin Island | 10 | 1998 | Active | 1,925 | 193 | 40 | 5 | 1.1 | | Yes |
| Total | | | | 270,285 | 23,550 | | 602 | 16 | | |
| Average | | | | 24,571 | 2,141 | | 55 | 1.5 | | |

*Colony Habitat Destroyed by Hurricanes Katrina and Rita in 2005.