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Chase Lake Pelicans Make a Comeback

What had been the largest nesting colony of American white pelicans in the United States appears to be back in business after two years during which adults abandoned their nests and fledged virtually no chicks.

Scientists and wildlife managers were pleasantly surprised this spring when more than 34,000 white pelicans descended on the 4385-acre Chase Lake National Wildlife Refuge in North Dakota to nest. That's the second largest number of nesting white pelicans at Chase Lake since refuge scientists began annual monitoring of the birds in 1972.

One of North America's largest birds, white pelicans measure 6 feet from bill to tail, weigh up to 20 pounds, and can have a 9.5-foot wingspan. The pelicans nest in colonies of 50 to 40,000 birds, mostly on lakes and marshes in the northern Great Plains of the United States and Canada. Most winter near the Gulf of Mexico. Unlike their cousins the brown pelicans, white pelicans do not dive for food. Instead, they herd nongame fish such as minnows or carp into shallow waters, then scoop them up using their pouches as dip nets. The birds also eat salamanders and crayfish.

Chase Lake National Wildlife Refuge was created on the North Dakota prairie by President Theodore Roosevelt in 1908 as a sanctuary for white pelicans, which were in danger of being hunted to extinction. Only 50 pelicans nested on the new refuge at the time. This year, scientists counted 17,000 nests at Chase Lake, second only to the 19,000 at Marsh Lake in Minnesota.

Scientists are uncertain why the white pelicans returned to Chase Lake this year, after their earlier abandonment of the refuge. Nor are they entirely sure why they left before. One suggested possibility—toxic pollutants—seems unlikely, since the birds fan out to forage, flying up to 100 miles. Thus, they are exposed to different environmental conditions, says Marsha Sovada, a research wildlife biologist with the US Geological Survey's Northern Prairie Wildlife Research Center in Jamestown, North Dakota.

Instead, Sovada believes marauding coyotes, which had not been seen among pelican colonies at Chase Lake for years, may have caused the easily spooked adults to abandon their nests in 2004. Next, a bout of cold, rainy, windy weather two weeks later killed nearly all of the remaining chicks. The adult pelicans then left. Only about 18,000 white pelicans returned to Chase Lake in 2005, about half the usual number. Those pelicans abandoned the lake after yet another early summer storm brought cold, rain, and wind that killed most of the chicks.

The severe weather came when pelican chicks are particularly vulnerable. Adults usually arrive at Chase Lake in April and begin nesting in May. Most chicks hatch in early June. Parents protect chicks from the elements until late June, when they cease brooding. The chicks then form crèches (groups) with other chicks, huddling together for warmth. They are fully fledged by early August and leave Chase Lake with the adults by September.

Further, Sovada says, pelicans usually nest on islands at Chase Lake and elsewhere, which protects their eggs and chicks from coyotes and other mammalian predators. In 2004, however, rising water levels flooded portions of Chase Lake's islands just as the number of nesting pelicans was increasing, forcing about 6000 pelicans onto a nearby peninsula easily reached by coyotes.

Despite the return of white pelicans to Chase Lake, refuge managers are concerned for the flock's future. Scientists monitoring the birds suspected in 2002 that West Nile virus had infected the flock. The National Wildlife Health Center in Madison, Wisconsin, confirmed the diagnosis in 2003. While the numbers can vary considerably, up to 44 percent of pelican chicks that survive to 15 July (when mosquito populations usually spike) die from the virus each year, Sovada says. Federal and state agencies are currently funding studies of the virus among Chase Lake's pelicans, as well as the pelicans' population dynamics, mortality factors, and foraging behavior.

For now, at least, Chase Lake's white pelicans seem secure. Rising numbers—attributable, Sovada says, to several years of high chick survival rates in the late 1990s and early 2000s—are good indications that Chase Lake's pelicans are on the rebound.

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