## DEPARTMENT of the INTERIOR

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Bureau of Sport Fisheries and Wildlife

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## WHAT A WONDERFUL--BUT ENDANGERED--BIRD IS THE PELICAN

When the brown pelican joined the Nation's unenviable endangered species list recently, the news came as no surprise to wildlife observers—the bird has almost disappeared along much of the gulf coast. But the suspected reason for its decline is another story, and a familiar one.

Secretary of the Interior Walter J. Hickel declared the brown pelican endangered after reviewing test findings from two Interior laboratories whose evidence suggests that pesticides are wiping out the species.

To date, 101 species of wildlife in the United States have been identified as in danger of extinction.

Dr. Leslie L. Glasgow, Interior Assistant Secretary in charge of fish, wildlife, and parks, points out that pesticides haven't directly killed the pelicans, but have caused them to lay eggs with thinner shells. The eggs are easily crushed by the mother as she nests and attempts to incubate them.

"DDE, a breakdown product of DDT, affects calcium metabolism, causing the birds to develop decidedly thinner eggshells," he said. "Coastal waters contain high concentrations of the poison, which is taken in by fish. The fish, in turn, are eaten by pelicans, with the result that very high dosages are picked up by the birds."

The laboratories that uncovered the damage are the Denver Wildlife Research Center in Colorado and Patuxent Wildlife Research Center in Maryland, both operated by Interior's Bureau of Sport Fisheries and Wildlife.

The Denver Center analyzed eggs from Anacapa Island off California, a traditional nesting area for large numbers of brown pelicans, and found the shells to be considerably thinner than normal. Bird remains from this area also contained very high concentrations of DDE. Biologists from the California Fish and Game Department found many nests with crushed eggs.

On the east coast, the Patuxent Center found much the same conditions after studies of eggs from the traditional nesting site at Cape Romain National Wildlife Refuge in South Carolina.

Dr. Glasgow said brown pelicans are in good breeding condition only along Florida coasts, particularly at Pelican Island. This is the site of the first Federal wildlife preserve in the United States, created by President Theodore Roosevelt in 1903.

Censuses and other fieldwork, plus laboratory analysis by the Bureau of Sport Fisheries and Wildlife and the Florida Division of Game and Fresh Water Fish, show much lower pesticide concentrations and much less loss of reproduction capabilities in the brown pelicans in Florida, Dr. Glasgow said.

"We don't know how long Florida birds will be protected because pesticides are carried to distant regions by currents and fish, so even these coastlines could be affected later," he said. "For example, pesticides are showing up in brown pelicans along Jamaican and Mexican coastlines, and are being picked up by birds in the Tampa Bay area."

"Brown pelicans disappeared from Louisiana and Texas shores before we had a chance to look for causes, so we can't point to anything definite about this area. But biologists reported large-scale fish kills from pesticides at the time of the decline, so these chemicals may have been the crucial factor," Dr. Glasgow said.

Possessing a rather large head, a huge pouch, big body and 6-foot wing span, the brown pelican is one of the better fliers. With combination of wing beats and gliding, it moves over coastal waters looking for a flash of fish. Once they are spotted, the bird dives into their midst and scoops a number in its large bill and pouch.

The brown pelican hatches her eggs--usually about three--in small nests of sticks, grass and reeds on the ground or in mangroves. Incubation takes about 30 days; for the first two weeks the young are very weak and must be shaded from the killing sun. Then a fluffy white down appears gradually changing to feathers. Independence from the parents comes soon after, and they are ready for reproduction in their second year.

The pouch elicits most interest from observers, who marvel at how efficient this tough elastic tissue is as a carryall for captured fish.

"Loss of this interesting bird would be tragic," Dr. Glasgow said. "It is not a threat to angling, because it feeds on the kinds of fish humans don't go after and nests in area uninhabited by people. Its striking appearance, plus flying and fishing abilities, have won it the respect of many Americans."

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