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Patagial Tag Causes White Pelican Death

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Patagial tags are used on many species of birds to facilitate individual recognition and to document avian movements. Although generally reliable (Marion and Shamis 1977), several investigators report that wing tags cause skin or feather abrasion (Anderson 1963, Southern 1971), reduced breeding success (Lockhart and Kochert 1979), or increased mortality rates in migratory species (Howe 1980). However, heretofore no reports implicated patagial markers as a direct cause of avian mortality.

On 30 July 1987 we visited a colony of American White Pelicans (*Pelecanus erythrorhynchos*) located in the Laguna Madre, Kenedy County, approximately 30 km south of Corpus Christi, Texas. The colony contained 230 active nests on a 1.7 ha dredged material island. During our nest count, we found the body of an emaciated adult pelican. The ground around the pelican was scuffed as if a struggle had taken place and several small plants nearby were broken or twisted at their base. The pelican's bill was ensnared and held firmly to the wing by a patagial tag. Somehow, perhaps during preening, the pelican had slipped its bill between the wing and the tag and was unable to extract it.

The dumbbell-shaped patagial tag was made of plastic-coated nylon fabric which was folded over the leading edge of the wing anterior to the elbow and secured with a single aluminum "pop rivet" (see Stiehl 1983). When the tag was removed and flattened out, the centers of the rivet holes near opposite ends of the marker were 20.5 cm apart. At this spacing, the tag fits too loosely on the wing. Banding records indicated that the pelican was banded as a pre-flight juvenile. Apparently the bander allowed too much space between the rivet holes when the tag was applied in an attempt to permit wing and feather growth as the bird matured. This suggests that we should measure the patagial areas of adult birds, especially large and long-billed species, to insure that tags applied to juveniles fit adults properly.

The dead pelican was banded 8 June 1984 near Lake Williams, North Dakota. The pelican had been repeatedly observed for three weeks prior to its death feeding and brooding a nestling in the south Texas colony. Since "helpers" are unknown in pelicans and we found no evidence of that behavior in this colony, we assumed that this pelican was a breeding bird. Although many White Pelicans banded as juveniles in North Dakota are recovered in Texas (Strait and Sloan 1975), this is apparently the first record of any pelican

raised in a northern colony breeding in the southernmost colony (Sidle et al. 1985). This observation may also document the fact that three-year-old pelicans may be reproductively active. Unfortunately, when we found the bird, it was too badly decomposed for us to determine sex.

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