

participating in the flocks. In over 22 h of focal animal observations and several hours of unscheduled observations Great Egrets invariably won interspecific encounters among regularly participating species and Snowy Egrets invariably lost them. While Great Egrets were only rarely disturbed by other Great Egrets when foraging in aggregations, Snowy Egrets were frequently disturbed by brief fights with each other and with Great Egrets and by being supplanted by foraging spoonbills and ibises. This frequent disturbance is probably responsible for the lower capture success proportion of Snowy Egrets, which is the main factor responsible for their lesser increase in foraging efficiency.

Thus, it appears that individual Great Egrets derive a greater benefit from associating with Roseate Spoonbills than do individual Snowy Egrets and that this difference is mainly due to their higher interspecific dominance status. This effect is similar to that described by Willis (1966, 1973) for ant-following birds. In both cases the presence of individuals of dominant species limits the advantage individuals of subordinate species can obtain by joining the association. This suggests that the controlling effect that Willis found interspecific dominance to have on the composition of ant-following bird flocks may be more general among beater-follower associations.

These observations were made during an Organization for Tropical Studies field course at OTS' field station at Palo Verde in Guanacaste Province. I appreciate the advice of S. Smith-Stiles during the project, the help of S. T. Patti in the field, and the comments of G. Sullivan, R. H. Wiley, and E. O. Willis on an earlier draft.

#### LITERATURE CITED

- ALTMANN, J. 1973. Observational study of behavior: sampling methods. *Behaviour* 49: 227-265.
- CHRISTMAN, G. M. 1957. Some interspecific relations in the feeding of estuarine birds. *Condor* 59: 343.
- COURSER, W. D., & J. J. DINSMORE. 1975. Foraging associates of White Ibis. *Auk* 92: 599-601.
- DINSMORE, J. J. 1973. Foraging success of Cattle Egrets. *Amer. Midl. Natur.* 89: 242-246.
- EMLEN, S. T., & H. W. AMBROSE III. 1970. Feeding interactions of Snowy Egrets and Red-breasted Mergansers. *Auk* 87: 164-165.
- FRIEDMANN, H. 1967. Avian Symbioses. Pp. 291-316 in *Symbioses*, vol. II (S. M. Henry, Ed.). New York, Academic Press.
- GRUBB, T. C., JR. 1976. Adaptiveness of foraging in the Cattle Egret. *Wilson Bull.* 88: 145-148.
- HEATWOLE, H. 1965. Some aspects of the association of Cattle Egrets with Cattle. *Anim. Behav.* 13: 79-83.
- LECK, C. F. 1971. Cooperative feeding in *Leucophoyx (Egretta) thula* and *Podilymbus podiceps*. *Amer. Midl. Natur.* 86: 241-242.
- MOYNIHAN, M. 1962. The organization and probable evolution of some mixed species flocks of neotropical birds. *Smithsonian Misc. Coll.* 143: 1-140.
- PARKS, J. M., & S. L. BRESSLER. 1963. Observations of joint feeding activities of certain fish-eating birds. *Auk* 80: 198-199.
- RAND, A. L. 1954. Social feeding behavior of birds. *Fieldiana-Zool.* 36: 1-71.
- RICE, D. W. 1954. Symbiotic feeding of Snowy Egrets with Cattle. *Auk* 71: 472-473.
- WILLIS, E. O. 1966. Interspecific competition and the foraging behavior of Plain-brown Woodcreepers. *Ecology* 47: 667-672.
- . 1973. The behavior of Ocellated Antbirds. *Smithsonian Contrib. Zool.* 144: 1-57.

Received 11 April 1977, accepted 28 August 1977.

### Osprey Trapped by Water Chestnut

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Little is known on the mortality of the Osprey (*Pandion haliaetus*) after leaving the nest (Tyrrell 1936, *Auk* 53: 261-268, Bent 1937, *Life Histories of North American Birds of Prey*, Dover Publications Inc., New York, pp. 352-379, Henny and Wight 1969, *Auk* 81: 173-185). Lafontaine and Fowler (1976, *Auk* 93: 390) reported a Golden Eagle (*Aquila chrysaetos*) killing and eating a mature Osprey, and Paul Spitzer (pers. comm.) mentions that juvenal Ospreys sometimes break a wing when diving into shallow water.

On 9 September 1976 at 1300, it was reported to me that a large hawk-like bird was struggling in the

shallow tidal water of South Bay (Hudson River, Town of Red Hook, Dutchess Co., New York). On investigating by canoe, I came across an Osprey struggling in about 1 m of water, 15 m from shore. The bird attempted to fly, but only succeeded in lifting a little above the water, being pulled back into the water by a single large plant of water chestnut (*Trapa natans*) in which it was entangled. The bird seemed exhausted by its attempt to get away. When I tried to pick the bird up, it spread its tail, lay back in the water, and exposed its talons to me. I put a paddle under the bird and lifted it out of the water onto the gunnel of the canoe. The bird was in juvenal plumage, with a buffy nape and underparts more brown than white (Brasher 1936, Ospreys, in *Birds of America*, part 2, T. G. Pearson ED., New York, pp. 93-96; Bent 1937).

The long, cordlike, submersed stems of the water chestnut were wrapped around the bird's back, under the wings, and across the chest, with the main stem about 1 m long trailing behind attached to a large rosette floating in the water. There were no visible injuries to the bird. By working carefully from behind the Osprey, I was able to cut most of the water chestnut away. When I reached in front of the bird to pull the rest of the plant off, it flew away, trailing a small part of the submerged stem with it. At first the bird flew weakly, but when about 300 m from me it lost the rest of the water chestnut and began soaring. It landed on a dead tree along the edge of North Bay, 1 km away. I estimated the weight of water chestnut at 4.5 kg.

My thanks to Dara Wishingrad in reporting the bird to me and assisting in paddling the canoe, Erik Kiviat and Brooke Feeley for their assistance in preparing the manuscript. This is Bard College Field Station contribution 14. Received 22 October 1976, accepted 22 October 1976. Edited by O. L. A., Jr.

### **A Jabiru (*Jabiru mycteria*) Specimen from Texas**

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On 26 July 1973, Mr. Charles Donaldson picked up an injured Jabiru (*Jabiru mycteria*) at the south city limits of Houston, Harris County, Texas. The bird was given to Mrs. John Snyder of LaPorte, Texas, who attempted to nurse the bird back to health. The stork died the evening of 27-28 July. I prepared the specimen, an immature of unknown sex, and deposited it in the Texas Cooperative Wildlife Collections, Texas A&M University (No. 9524). The bird was not fat and had an injury on the upper breast. The feathers did not show excessive wear or wing clipping, as might be expected of a former captive.

In an attempt to locate the origin of this unusual visitor, I contacted the several zoos in Texas, all with negative results. The species is imported regularly as indicated by the 56 Jabirus listed for the years 1968, 1969, and 1970 (Banks 1970, Banks and Clapp 1972, Clapp and Banks 1973).

The Jabiru has twice been reported from Texas. A head of this species was sent to the Philadelphia Academy of Natural Sciences in 1867, supposedly from Austin, Travis County; the specimen is now missing and the locality in doubt (Oberholser 1974). In 1971 an immature Jabiru remained on the King Ranch, Kleberg County, from 18 August to 8 September; it was observed and photographed by several persons (Hauke and Kiel 1973). A copy of the photograph is deposited in the Texas Photo-Record File, Texas A&M University.

About the same time that Donaldson picked up the Jabiru near Houston, an immature was discovered near Bixby, Oklahoma (McConnell and McConnell 1974). The bird remained in the Bixby area from 28 July to at least 9 August 1973. This record was also documented by photographs.

It is significant that all three recently appearing Jabirus were immatures. This fits well with our knowledge of post-breeding wandering by juvenal ciconiiforms. Many persons assume (see Oberholser 1974) that Wood Storks (*Mycteria americana*) appearing in Texas in late summer and fall come from Mexico. Many of these birds are immatures. Jabirus nest with or near Wood Storks in the State of Campeche, and possibly in Tabasco (A. Sprunt IV, in litt.). Sprunt states that "Jabiru's are not all that uncommon in the big marshes in Tabasco and Campeche. We have seen as many as twenty in a day of aerial survey work over these marshes." I believe it is highly probable that the three recent occurrences represent situations where immature Jabirus mixed with flocks of Wood Storks and moved north with these flocks into Texas and Oklahoma in postbreeding dispersal.

This is contribution number TA 13739 from the Texas Agricultural Experiment Station.