

## GENERAL NOTES

**Some observations on the behavior of Whistling Herons.**—Recent discussions of the taxonomic position of the Whistling Heron (*Syrigma sibilatrix*) have been hampered somewhat by lack of a complete knowledge of the bird's behavior (Bock, Amer. Mus. Novit., no. 1779, 1956; Humphrey and Parkes, Proc. Internat. Ornithol. Congr., 13:84-90, 1963). The following fragmentary observations, which were made in Corrientes Province, Argentina, during August-September 1969 while I was there studying storks, are offered to help fill that gap. To date relatively little information has been published on the behavior of *Syrigma* (cf. Short, Wilson Bull., 81:330-331, 1969).

*Flight.*—In contrast to other herons, which have a slow wing-beat and deep wing-strokes, the Whistling Heron flies with short, stiff, and relatively rapid wing-beats. The characteristic flight makes the species recognizable at long distances. At first glance or at a distance, the flight is more reminiscent of a large lapwing or plover than a heron. On the only occasion that I timed the flight of a *Syrigma*, it was flapping at a rate of 273 per minute. This rate is rather fast compared to the rates I have measured in other (slightly larger) species of herons: *Ardea melanocephala* (Kenya: 1 record) = 162/min; *Ardea purpurea* (India: 1 record) = 148/min; *Egretta intermedia* (India: 11 records) = 196/min.

Whistling Herons that I observed usually flew with the neck only partially retracted and not with the head pulled all the way back onto the shoulders as do most other herons. Furthermore, the birds frequently extended their neck fully forward in flight and uttered a series of melodious whistles (see below). During aerial calling, the flapping rate increased and the amplitude of the wing-strokes decreased, with the wings hardly going above the level of the back on their up-stroke.

*Vocalizations.*—Both the common and scientific names of the Whistling Heron derive from the bird's commonest call: a clear, loud, melodious whistle, about 1-1.5 sec long and often repeated in a series of 2-5 calls *ca.* 0.5 sec apart (cf. Friedmann and Smith, Proc. U.S. Natl. Mus., 100:411-538, 1950). This whistle is given either while the bird is perched or in flight; the performing bird usually extends its neck fully with each call or series of calls and holds its bill widely open.

A second call that I heard was a more heron-like guttural croak, which, however, was much higher-pitched and with a more sibilant quality than the comparable calls I have heard in other herons.

A third call, which I heard only during a ritualized display at a feeding area (see below), was a high-pitched, flatulent, and rasping buzz about 1 sec in duration, uttered forcefully at the peak of the display.

*Ritualized displays.*—As described above, during the whistling vocalizations either perched or in flight the neck is usually extended fully. On one occasion I saw several Whistling Herons perched within the canopy of a small forest bordering a pond. One bird stood on a limb, extended its neck fully upward about 30° in front of vertical, pointed its bill up in line with the neck, and gave a series of 4-5 whistles 1-1.5 sec long and about 0.5 sec apart. The bill was gaped open continuously during the series of vocalizations.

On 16 August 1969 I saw three *Syrigma* fly in and land in shallow water at the edge of an extensive marsh. One was giving the melodious whistle as it landed. After landing, the three walked about for a few minutes. Then one bird approached to within several meters of another and quickly adopted an oblique posture, with body, neck, and bill on a line and pointed down about 20° below the horizontal, so that the tip of the bill nearly

touched the surface of the water. As the bird stretched forward, it gave the flatulent buzz described above. This display was repeated several times by the same bird; the other two stood quietly and appeared to be watching.

At the "Estancia Tres Marias," just south of Corrientes City, I observed an apparent courtship display on 15 September 1969. A pair of *Syrigma* walked rapidly side by side at the edge of a garden with closely-clipped grass. Both held all their head-plumes and upper-neck feathers strongly erected and their bills high, just above the horizontal. Every four to five steps one bird (which I took to be the male) bowed forward until its bill almost touched the ground; then it stood erect once more and continued marching alongside the other bird. During the bow, the pace of both birds slowed but did not stop. Occasionally one or the other of the displaying birds raised its head until the bill was about 60° above the horizontal, gaped the bill widely, and uttered 2-4 whistling notes. Another pair of Whistling Herons was performing similar displays about 15 m away. After displaying for about 5 min, both birds of the pair flew off together.

The latter display may be related to the one described by Short (loc. cit.). Like that author, I am unable to comment on the significance of these observations, other than to say that the behavior of *Syrigma* appears quite unlike that of any other heron that I have observed, including *Nycticorax*. I agree with Humphrey and Parkes (loc. cit.) that the present behavioral evidence suggests that *Syrigma* is not closely related to *Nycticorax* and should not be included in that genus, as was suggested by Bock (loc. cit.). Further conclusions on the taxonomic relationships of *Syrigma* must await a thorough study of the ethology and ecology of the species. Such a study would seem highly feasible in northeastern Argentina, where the bird is abundant and easily observed.

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**Nestling mortality in a Texas heronry.**—Nesting success studies of colonial birds are hampered by the unmeasured effect of the investigator on the colony. Dusi and Dusi (Wilson Bull., 80:458-466, 1968) state that their presence in a heronry may have affected breeding success, but given no measurement of this affect. The following study was an attempt to quantify the effect of frequent nest checking on reproductive success in a Texas heronry.

The study was conducted during the summer, 1970, at a 50-acre lake on the Rooke Ranch, Refugio County, Texas. The colony consisted of an estimated 6,582 birds, 91 per cent of which were Cattle Egrets (*Bubulcus ibis*). The remaining 9 per cent were: 175 Little Blue Herons (*Florida caerulea*), 150 Snowy Egrets (*Leucophoyx thula*), 100 Louisiana Herons (*Hydranassa tricolor*), 50 Roseate Spoonbills (*Ajaja ajaja*), 40 Black-crowned Night Herons (*Nycticorax nycticorax*), 35 Anhingas (*Anhinga anhinga*), 20 American Egrets (*Casmerodius albus*), 6 Great Blue Herons (*Ardea herodias*), and 6 White Ibises (*Eudocimus albus*). About 200 Boat-tailed Grackles (*Cassidix mexicanus*) were also present.

The heronry was situated in about five acres of dead huisache (*Acacia farnesiana*) trees at the southeast edge of the lake. Water depth at the colony varied from two to three feet, and most nests were 18 to 48 inches above water. Two study sites, each 100 yards by 15 yards, were selected in the heronry. The sites were 75 yards apart, a distance sufficient to prevent disturbance to one site while the other was being checked. The