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The gular pouch of the female White Ibis.—The gular pouch of the female White Ibis (*Eudocimus albus*) is better developed than her mate's during the breeding season. This condition is unusual among birds and contrary to what is reported in the literature for this species (Beebe 1914, *Zoologica* 1: 248; Meyerriecks 1962, pp. 522-529 in *Handbook of North American birds*, vol. 1 (R. S. Palmer, Ed.), New Haven, Yale Univ. Press).

I differentiated males from females by a number of criteria. The male is larger and has a longer bill than the female. Palmer (*in Palmer ibid.*) reports a mean bill length of 153.3 mm for seven males and 124 mm for nine females. In the Florida State Museum collection three males have a mean bill length of 172 mm and three females 140 mm. The male is more aggressive and defends a small display site to which he attracts the female. He is the performer of the snap display (after Meyerriecks, *in Palmer ibid.*) and mounts during copulation. He is also the sole gatherer of nest material while the female is the primary builder. The male, as determined by these criteria, shows little if any throat enlargement. Despite considerable variation in the extent of pouch development, no pairs were seen in which the male's gular region was larger than the female's ($N > 100$). The maximum size of the pouch in the female was approximated well by Pennock (*in Bent* 1926, U.S. Natl. Mus. Bull. 135: 24) where he states that the pouch is as large as "a good-sized lemon," although he also attributed it to the male.

One possible function of an enlarged female pouch is suggested from the displays during pair formation. Females land near unmated males and perform a head rolling display at an average rate of 2.8 per minute ($N = 233$) while directly facing the male. The side of the head is placed on the back and then rolled up to 180 degrees moving the bill from a horizontal position, through the vertical, to the other side. This action fully exposes the gular region to an individual with a frontal view (i.e. the male to whom the female is displaying). This could thereby function in sexual recognition and elicit the appropriate response from the male when the female flies to him.

The consistent orientation of the female while head rolling contrasts sharply with

the behavior of the male while performing the snap display. He shifts the direction of his body continuously while repeatedly extending the head and neck out and downward. A typical display bout consists of three to 10 displays per minute ($\bar{x} = 4.2$, $N = 1238$), with fewer than 10% oriented toward any particular female.

The possible function of the pouch in augmenting vocalization must be mentioned. Males and females vocalize under similar conditions, namely, when disturbed or alarmed (one or more brief honks), when calling to lost young (single extended honks), and during the up-down greeting display performed when one member of the pair returns to the nest (after Kahl 1972, *Ibis* 114: 22). In this display both the male and female extend the head and neck out and up with the bill horizontal and gaped. They utter a series of single honks while arching the bill through 90 degrees, bringing it to a vertically downward position. While no sexual difference is apparent between the calls in the first two situations, the male notes are often of a much lower pitch than the female's during the greeting display. While the effects of the pouch on sound production in this case are questionable, observed differences in the quality of the vocalizations may function in sexual recognition, with the pouch playing a role.

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Snipe breeding displays performed on wintering grounds.—Characteristically the Common Snipe, *Capella gallinago delicata*, exhibits on the breeding grounds a territorial display in which it produces a sound called bleating or winnowing. Tuck (1972, *The snipes*, Canadian Wildl. Serv., Monogr. Ser. No. 5) described these sounds in detail. Normally males use bleating displays to attract a mate on the breeding grounds and later to mark the nesting territory. According to Tuck snipe bleat sporadically during migration and he has heard snipe bleating on the wintering grounds in Louisiana during February and March.

Twice during the winter of 1972-73 I heard snipe bleating on the wintering grounds in Cameron Parish, Louisiana. The first incident occurred on 1 December 1972; while collecting snipe on Rockefeller Wildlife Refuge I heard a single snipe in a dive emit one short bleat. The second time I heard bleating was on Sabine National Wildlife Refuge on 4 January 1973. It was dusk and I could not see the birds, but between 1750 and 1800 I heard three different, single bleats, each about 5 min apart. This was probably a different bird each time, but as the birds were not seen this is not certain.—ROBERT H. NANEY, *Louisiana Cooperative Wildlife Research Unit, Louisiana State University, Baton Rouge, Louisiana 70803*. Accepted 1 Feb. 74.