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SHORT COMMUNICATIONS

Copulatory Behavior of the American Bittern

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There appears to be almost no detailed information on the behavior associated with copulation in the American Bittern (*Botaurus lentiginosus*); Palmer (Ed., 1962, Handbook of North American birds, vol. 1, New Haven, Yale Univ. Press) has summarized the fragmentary notes on this species. The comparable behavior of the other three *Botaurus* species is also undescribed or inadequately known (Hancock and Elliott 1978, The herons of the world, New York, Harper and Row). The following observations thus seem worth recording. At 1900 on 26 May 1976, while watching waterfowl at Christian Pond, Grand Teton National Park, I noticed a pair of bitterns fly into the pond area, with what proved to be the female leading and the male following about 3 m behind. After landing, the female began foraging immediately, while the male stood about 27 m away in short sedge vegetation. (At least one male Bittern had been heard calling on the pond as early as 21 May, but none had been seen there previously.) Watching the male, I thought it was preparing to call, because I saw it fluffing its plumage and progressively exposing its white nuptial plumes, but it simply stood in this posture, occasionally lowering its head and shaking it from side to side, with the bill held horizontal and very low (Fig. 1a-d). I thought at first that it might be retching, but the behavior was repeatedly performed, and soon the male began moving toward the female, which was still foraging. The female finally turned and walked toward the approaching male, which then began following her closely, pausing occasionally to repeat the "retching"

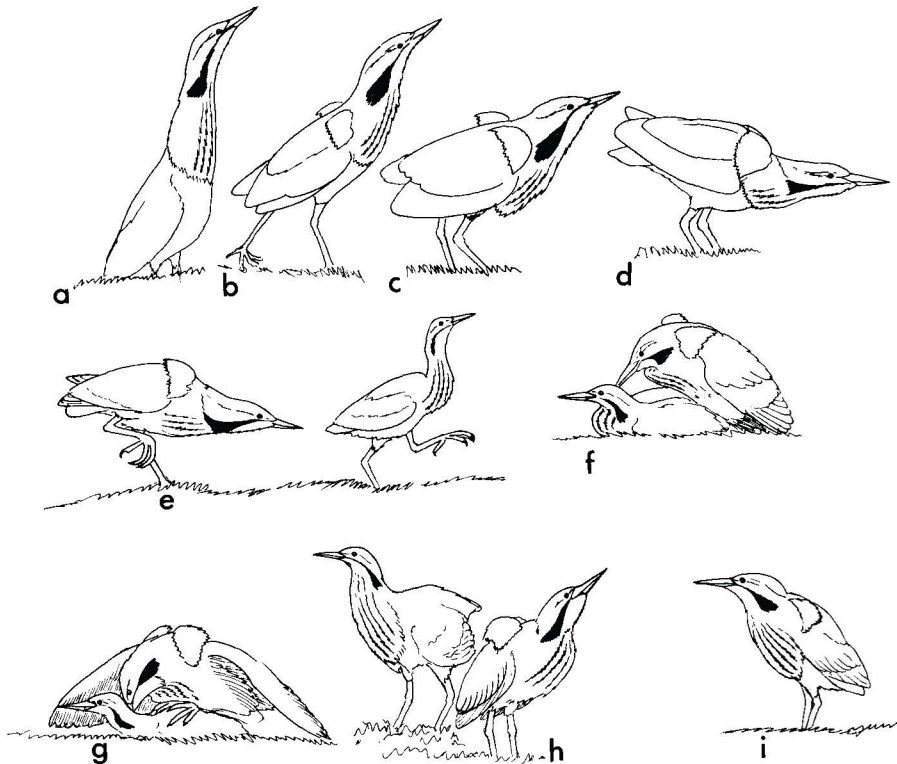


Fig. 1. Postures of male American Bittern during precopulatory display (a-e), during copulation (f-g), and following copulation (h-i); the drawings are based on a sequence of 15 35-mm transparencies taken of the incident.

movements. At times the female apparently tried to outwalk the male (Fig. 1e), but soon he caught up with her and put one foot on her back, immediately causing her to go prone in the sedge cover. The male then quickly mounted, lowering his wings strongly over the female and seemingly nibbling or preening her head feathers but apparently not grasping her nape (Fig. 1f–g). Copulation lasted about 15 s and appeared to be performed silently (although I was about 37 m away). Afterwards, both birds stood up and ruffled their plumage (Fig. 1h), after which the female walked back to the water and began foraging, while the male moved about 5 m in the other direction. There he stood quietly in the same fluffed plumage posture (Fig. 1i) for most of the following hour, and only once more did he perform the “retching” display. When I left at 2005, the two birds were still in this situation. During the entire period, I twice heard a Bittern calling from a considerable distance, but no obvious calling was done by the birds I was watching. On 13 June an incubating female was found on her nest about 46 m away from this point.

In common with the few other reported Bittern copulations, the behavior did not occur at the nest, and the white nuptial plumes were clearly an important display component. Apparently, the European Bittern (*B. stellaris*) sometimes seems to feed the female during copulation, which might account for the evolutionary origin of the retching-like movements I observed. In most respects the behavior I observed corresponds closely to the description by Fargo (1928, Auk 45: 203) of a probable precopulatory sequence, but I did not notice the chirping calls that he heard from the male during the approach phase. *Received 3 March 1980, accepted 12 May 1980.*