

them up at intervals previous to further pummeling, were most of them of fair size. No doubt the pounding process was to kill them before swallowing and to do such a good job of it that they were certain the fish could not erect the dangerous spines which otherwise might cause gastric complications.

As I knew, from soundings the depth of the water in all parts of the lake, the Herons did their fishing in depths varying from six to fourteen feet during the hour or more that I observed them, and each one carried out of the lake quite a number of fish. It proves that this species of Heron is not afraid to alight in deep water and remain there for some time. The wings were held up out of the water and not very much of the body was submerged. When a fish had been caught, they rose without difficulty from the surface.

In the October number of 'The Auk,' 1926, p. 537, is a somewhat similar observation by Mr. Owen J. Gromme and another is recorded by Dr. T. Gilbert Pearson in 'Bird Lore' Vol XXV, p. 77. No doubt these birds were also fishing.—J. P. JENSEN, *Dassel, Minnesota*.

Note on the Courtship of the Bittern (*Botaurus lentiginosus*).—Mr. William Brewster, in his original account of the display of white plumes in the Bittern, says: "We frequently saw them [the white plumes] fully displayed when the Bitterns were 'pumping,' but not then more conspicuously or in any different way, than at other times." The display of white plumes appears to be a continuous performance during the courtship, and not limited to the period of "pumping." This has been confirmed in published descriptions by other observers and has hitherto been my own experience. Thus, on May 30, 1913, I recorded in my notes of a Bittern that "pumped" at intervals: "White plumes at shoulders visible all the time as he walked about the meadow with head on level with shoulders. At times he stood motionless with head pointing up, but the white plumes still showing."

On May 18, 1929, from a canoe in the Topsfield marshes of the Ipswich River I had an excellent opportunity to watch a Bittern standing in short grass about a hundred and fifty yards away, and in this case the display of plumes followed a different order. For a minute or less the bird would stand erect with bill pointing upwards and with no trace of white plumes to be seen. He would then crouch, the conspicuous white plumes would suddenly pop out from his shoulders and wave in the breeze, he would at once stretch out his neck and act as if gulping in wind and then belching it out, at the same time emitting the "pumping" sound three to five times, generally four times. The Bittern would then resume the erect position and the plumes would disappear as quickly and as mysteriously as they had come. This series of events I watched closely with eight power binoculars about a dozen times. At no time were the plumes to be seen except during the "pumping."—CHARLES W. TOWNSEND, *Ipswich, Mass.*