GENERAL NOTES

Normal Flight of a Black Duck after Healing of Wing Fractures.—On December 5, 1942, while Kenneth H. Doan and I were in a blind on South Bass Island, Lake Erie, Ottawa County, Ohio, a Black Duck (*Anas rubripes*) alighted among our decoys, after first circling them in the wary Black Duck fashion. Its flight appeared normal in every respect. Upon retrieving this duck I noticed that its left wing was decidedly shorter than the right. Dissection revealed that the left humerus had at some time been fractured near the elbow, and in healing, the two segments of the bone had fused at an angle. Thus the humerus was shortened; the proximal segment pierced the skin and protruded at least a quarter of an inch. (Figure 1.) The hollow center of the bone thus exposed had been completely blocked with minute bone fragments, behind which was normal-appearing marrow. The edges of the skin around the exposed tip were entirely healed. At the point of fusion, where the bone was greatly enlarged, there was an arched projection of bone with a hollow center between it and the fracture. An old shot-gun pellet, presumably the one that broke the humerus, was embedded in the muscle beside the point of fracture.

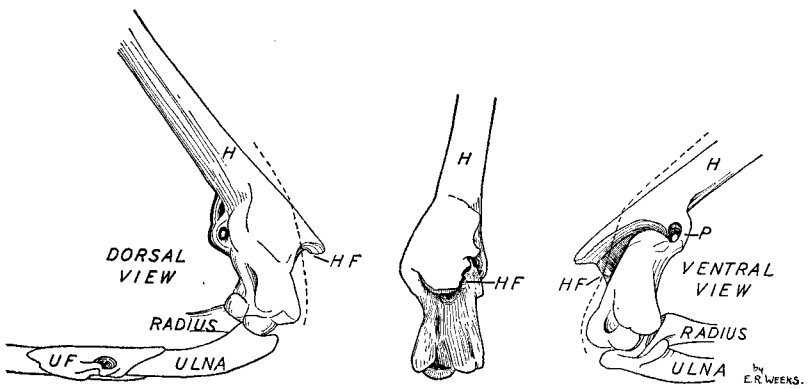

Figure 1. Healed bones of Black Duck wing.
H = humerus; HF = humerus fracture; UF = ulna fracture; P = arched projection of bone; dotted line = skin.

At some time, possibly when the humerus was broken, the ulna had also been fractured, obliquely, near the middle. This fracture had healed, leaving the bone normal in length, although somewhat enlarged at the point of fusion. The muscles and tendons surrounding the humerus and ulna were apparently in excellent condition, but were, of course, distorted because of the abnormal angle of the elbow joint. The fused portions of humerus and ulna appeared to be as strong as the remaining sections of these bones. The duck itself, although not fat, appeared to be in good physical condition. It seems remarkable that so mutilated a wing could function so well that there was no noticeable "limping" in the bird's flight.—MILTON B. TRAUTMAN, *F. T. Stone Laboratory, Ohio State University, Put-in-Bay, Ohio.*