

the Spring — the change in time being the result of a desire expressed by numerous members of the Union.

After adjournment short field excursions were made in the vicinity of Washington, April 9 and 10, by members of the Union, under guidance of Prof. Cooke and Mr. E. A. Preble of the Biological Survey.

The next meeting of the Union will be held in San Francisco in May, 1915.

JOHN H. SAGE,
Secretary.

GENERAL NOTES.

A Misinterpretation.— While photography is in many instances the only accurate and irrefutable means of determining the movements of rapidly moving objects there appears to be a misinterpretation in connection with the explanation of a figure in the April 'Auk.' I refer to the article, "Does a grebe spread its wings just before diving?" by Mr. Verdi Burtch, illustrated with Plates XXI and XXII. Figure 3, Plate XXI is a picture of a diving grebe taken instantaneously at the moment of disappearance and, as the author tells us, "shows a dark area representing the depression in the water where the grebe sat at the beginning of the exposure, *the 'ghost' of its wings fully spread out behind* as it started to lunge forward and the grebe itself nearly submerged a full length ahead."

I conclude that the so-called 'ghost' is considered to be the vague photographic impression made at the very beginning of the exposure. The shutter then remained open until the grebe had reached the almost submerged position at the right. If the exposure had been of that duration a continuous blurred image traversing the path taken by the grebe would have been the inevitable result and not, as we have had it explained, "a 'ghost' of the wings" followed by a photographically undisturbed area and then at the very close of the exposure a fairly well defined image of a grebe diving with its head held erect. In any event the supposed "ghost of the wings" would appear dark instead of light as seen in the figure on Plate XXI and intensified in the enlargement. Why should the grebe make such an intense and sharply defined image on the photographic plate just as it is disappearing while during the first part of the exposure practically no impression was made? It might be argued that the impact with the water had arrested its progress, but it does not seem possible that this retardation can come so suddenly and be as great as the relative intensities

of the first and last portions of this exposure would show. Although I admit an unfamiliarity with Holboëll's Grebe, if its methods of diving are at all similar to those of other grebes and water fowl as a whole, the erect head (if it is such) at the right side of this photograph appears odd. Except when the birds employ a gradual sinking motion the head is thrust forward and under when plunging and would not be in sight at the time, the rump was just disappearing.

While I realize that half-tone reproductions do not show all the details present in the photograph or better still, the negative, it seems that there has been a misinterpretation of the evidence presented in this picture. A much more logical interpretation would be that the so-called "ghost of the wings" is nothing more than spray caused by the bird's rapid plunge and backward thrust of the feet which, being highly reflective, would quite naturally appear light; the dark spots are shadows caused by the disturbance in the water; and the grebe may be anywhere from a few inches to several feet below the surface.—E. R. KALMBACH, *Biol. Survey, Washington, D. C.*

Concealing Postures of Grebes.—On October 3, 1913, I was fishing for bass in the tidal streams at Gibbstown, N. J. At one spot there was a very shallow ditch some five or six feet in width, containing at the time possibly six or eight inches of water.

A Pied-billed Grebe (*Podilymbus podiceps*) had been observed in the ditch about 11 A. M. and had made no special effort to get away with the exception of one or two half-hearted dives, the water of course not being deep enough. Early in the afternoon I walked down to the ditch with the hope of getting a closer view of the bird. I could see nothing of it as I gazed down upon the great mass of water lilies and other aquatic plant life which abounded in the ditch, but after a moment I became aware of an oblong body on the opposite edge of the ditch which up to that time had been taken for a partly submerged and mud-covered leaf but which was seen to be nervously moving at intervals and producing small circular wavelets on the water which in all other parts of the ditch was perfectly calm.

I partly turned with the intention of taking another step to get a better view, and was surprised to see a slender snake-like head a few inches in front of the object I had been watching, turn slowly about on the surface of the water and follow my movements. The facts were now self-evident, and the object I had been watching was nothing more than the glossy back of the grebe, which realizing the hopelessness of trying to escape by diving had resorted to this method of concealment, flattening itself out, on the surface of the water with its neck stretched out at full length. The wavelets were caused by a nervous movement of the feet beneath the water, doubtless getting ready for the dash which was about to follow.

I bent over in an effort to get a closer view, and the bird now evidently frantic with fear made an effort to sink itself breast first in the shallow stream. The breast and neck were forced beneath the surface, while the



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