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100 Years Ago in The Auk



From "Individual Variation in the Skeletons of Birds, and other matters" (1887, *Auk* 4: 266-268):

"Speaking now on the individual variation in the skeletons of birds I would like to reproduce here, in illustration of it, a pair of skulls which figured in an article of mine in 'Science' not long ago. As many readers of the 'The Auk,' [sic] both at home and abroad, possibly may not subscribe for that estimable journal, I was led to believe that in bringing these drawings more directly before ornithologists, many of them could not fail to find something of interest in them.

"These each represent a skull ($\times 2$) of the Yellow-headed Blackbird (*X. xanthocephalus*), the specimens having been collected by myself, and are now in my possession. We are very well aware that throughout animate nature, all specific forms vary more or less, and that the corresponding structures of any two species are never quite alike, either in form or size. So far as birds are concerned, I think it would be hard to find a pair of skulls, that would better show, taking this part of their organization into consideration, how great this variation may be sometimes. It is very evident that an *exact* description of one of these skulls would not answer for the other, notwithstanding that they are both from birds of the *same species*,—yet a

general description could be written that would fully cover all their salient features, and sufficiently differentiate them from descriptions of the skulls of other birds.

"With respect to *measurements* and exact descriptions, however, for any structure, for any particular species of bird, we are in the same quandary in our accounts of such structures among the lower vertebrates as the anthropotomists are with respect to descriptive human anatomy. Much might be written about these two skulls here figured which lack of space forbids, but this will not debar the thoughtful ornithotomist from making a careful study of them for himself. One thing it must point out to all, and that is, for our descriptions of such structures to be broad and full we should have before us, whenever it is possible, *abundance of material*,—and, too, with respect to measurements, we should aim to establish reliable *standards* through the calculation of averages computed from carefully taken individual data. . . ."

R. W. SHUFELDT, *Fort Wingate, N. Mexico*,
May 21, 1887.