

attract a large proportion of the migratory Canadian species. Some of the neighboring mountains, to continue the simile, doubtless also form Canadian islands, and there are probably many reefs—mountains of low elevation—where the area above high-water mark is sufficient to support only a few northern forms. It may be fairly questioned, however, if elevation here, as well as in other mountainous regions, is the sole factor governing the distribution of birds. That it is the chief one cannot be disputed, but certain birds are apparently influenced very strongly in their choice of breeding grounds by the presence or absence of certain trees or shrubs in which they are accustomed to build their nests. The flora of any given area is of course largely determined by altitude, but it may be materially affected, and even radically changed, by man's interference. For instance, in the region under discussion, spruces and firs are said never to reappear after the first cutting, the second-growth being invariably of hard woods; and, if tradition can be believed, several of the mountains near Graylock, which are now covered with beech, maple, birch, etc., originally had extensive tracts of "black growth," i.e., spruce and fir. Surely such changes must materially affect bird-life.

Graylock is in a state of transition. It still has large areas of spruces, but they are rapidly disappearing, and the character of the mountain is likely to undergo a great change within the next twenty-five years. It will be interesting to watch if the birds change also.

Of the fauna of the neighboring mountains I cannot speak positively, not having explored them to their summits; but I shall be surprised if they prove to harbor anything like the number of northern species which occur on Graylock.

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## DESCRIPTION OF THE FIRST PLUMAGE OF CLARKE'S CROW.

BY CHARLES F. BATCHELDER.

IN Colorado last spring, at a station known as McGee's, on the Denver and South Park R.R., in Chaffee County, I had the good

fortune to obtain a specimen of Clarke's Crow in first plumage. As no account of the bird in this early stage has, I believe, ever appeared, the following description may be of interest.

*Picicorvus columbianus*, *juv., first plumage* (♀, No. 1340, Coll. C. F. B., McGee's, Chaffee Co., Colorado, May 11, 1883). Above dull brownish gray, much darker than in the adult. darkest on rump and scapulars; upper tail coverts nearly black, but with a brownish tinge instead of the metallic blue-black of the adult.

Forehead and sides of head brownish ash, lighter than back, but the pearly tint of the adult is everywhere replaced by brownish. Nasal feathers dark brown. A dusky loreal spot. The white superciliary stripe and eye-ring, and other white about the face present in the adult, are wanting. The chin, however, is ashy white, with a few darker feathers scattered through it.

Beneath the general coloring is brownish ash, darkest on the breast. Most of the feathers of the throat, breast, and belly are tipped with ashy white, which gives an indistinctly barred effect to the plumage. Some of the feathers of the sides and rump are also tipped with white.

Wing similar to the adult. The white of the secondaries, however, extends along the margin of the outer web farther toward the base. There is also a small ashy spot at the apex of the seventh primary, and traces of the same on the eighth, ninth, and tenth primaries. The secondary coverts are obscurely tipped with white; and the under wing-coverts have conspicuous white tips. Tail similar to that of the adult; but the black lines on the shafts of the rectrices extend nearer to the tip (three-fifths of its length in the fourth rectrix); the black on the inner webs of the outer four rectrices\* extends along the shaft farther from the base; and on the fifth the white covers the end of the inner web for a fifth of the way to the base, runs up the middle of the web at least as much more, and extends along the edge of the web two-thirds of the way to the base. Under tail-coverts white, as in the adult.

The bill was dark gray; and the feet were gray.

I give the following measurements (in centimetres), and add for comparison the average of those of six adults. All the measurements are from dried skins.

♀, *juv.*, No. 1340 (first plumage): Wing, 17.80; tail, 10.40; culmen, 2.95; commissure, 3.40; depth at nostrils, 1.00; width at nostrils, 1.05; tarsus, 3.30; middle toe, 2.40; middle claw, 1.10.

Average of six adults: Wing, 19.28; tail, 11.73; culmen, 4.11; commissure, 4.53; depth at nostrils, 1.25; width at nostril, 1.16; tarsus, 3.54; middle toe, 2.63; middle claw, 1.28.

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\* In the published descriptions of this species I can find no reference to this black marking, which seems to have been overlooked, authors stating that the outer four pairs of rectrices are "white."