while to quote at length from this gifted observer and interpreter of bird ways:

"He opened his bill—*set* it, as it were, wide apart—and holding it thus, emitted four or five rather long and very loud grating, shrikish notes; then instantly shook his wings with an extraordinary flapping noise, and followed that with several highly curious and startling cries, the concluding one of which sometimes suggested the cackle of a robin. All this he repeated again and again with the utmost fervor. . . . The introduction of wing-made sounds in the middle of a vocal performance was of itself a stroke of something like genius. . . .

"That the sounds *were* wing-made I had no thought of questioning. . . . Two days afterward, nevertheless, I began to doubt. I heard a grackle 'sing' in the manner just described, wing-beats and all, while flying from one tree to another; and later still . . . I more than once saw them produce the sounds in question without any perceptible movement of the wings, and furthermore, their mandibles could be seen moving in time with the beats. . . .

"If the sounds are not produced by the wings, the question returns, of course, why the wings are shaken at just the right instant. . . . The reader may believe, if he will, that the bird is aware of the imitative quality of the notes, and amuses itself by heightening the delusion of the looker-on. My own more commonplace conjecture is that the sounds are produced by snappings and gratings of the big mandibles . . . and that the wing movements may be nothing but involuntary accompaniments of this almost convulsive action of the beak. But perhaps the sounds *are* wing-made, after all."[1]

The first, second, and third parts of the song, as described by Torrey, correspond, respectively, to what I have considered the second, third, and first parts. In view, however, of the continuous nature of the Boattail's performance, almost any part of the song might be taken as the first.

Mr. Alexander Wetmore tells me that his observations on the species at Punta Gorda in early February, 1919, fully support the conclusion that the pattering sound is produced mechanically by the mandibles.—Francis Harper, *Biological Survey, Washington, D. C.*

Clark's Crow in Denver.—The undersigned saw, to his amazement, a pair of Clark's Crows (*Nucifraga columbiana*) flying over the city well within the residential district on December 7, 1919; the region of Denver had had, previous to this date, two spells of zero weather, and whether the extreme cold caused these unusual visitors to our city it is hard to determine. This is the first occasion that I have seen this crow so far away from the mountains of our neighborhood, and the first time in Denver.—W. H. Bergtold, *1121 Race St., Denver, Colo.*

[1] A Florida Sketch-book, 1894, pp. 108–110.