A PRACTICAL METHOD OF RECORDING BIRD-CALLS.

BY WM. ROWAN.

The following notes are appearing in print for two reasons. In the first place, the many systems of recording the calls and songs of birds that have been published from time to time, have not proved of practical value. They have attempted too many things at once and as a result have become unpractical. It is my first object to demonstrate that there exists a method, sufficiently simple to be understood by all, and at the same time conveying far more information than the plain phonetic renderings now in common use. My second reason for publishing is to comply with the requests of various friends who have tried the method and adopted it permanently.

The system has the advantage of simplicity, plasticity and adaptability, and that it does not lay claim to scientific accuracy. The last may not sound like a recommendation, but as a matter of fact it is. Anything that could pretend to be really accurate would inevitably be too cumbersome to be practical.

The most nearly accurate method extant is that of musical notation, but this method has many flaws that are well known. It is moreover understood by such a small number of bird-students that it is unusable for general purposes. There are many good examples available, the twenty-seven versions of the songs of the Meadow-Lark by C. N. Allen in the Nuttall Bulletin, Vol. VI. (1880), pp. 145-150, being amongst the best that I have personally seen. It is true that anybody can sit down at the piano and play them but the writers of such records are few. Their use is therefore greatly restricted.

Modifications of the strict musical record are also plentiful. A good example is described under the title of "The study of bird notes" by Dr. Hans Stadler and Cornel Schmitt in British Birds, Vol. VIII. (1914-1915), pp. 2-8. The authors of this article claim for their system, as I do for mine, simplicity, but a glance at their examples and a perusal of their text, convinces one in very short time that the use of this too is confined entirely to musicians. It is therefore ruled out for the layman.

A more striking system which eliminates musical score altogether is that advocated in the Condor, Vol. XXV. (1923),
pp. 202–208, by Richard Hunt under the title "The Phonetics of Bird Sound." It is unfortunately impossible to summarize briefly this interesting article, but that the method described can never be of practical value is evidenced by the following statement: "A Dictionary of Bird Sounds can be built up by co-operative action and the words should eventually be classified not only in accordance with their references to the four classes of phonetic bird sound, but also with reference to the factors of pitch, intensity, speed, form, expression and timbre. For example, 'shrill' refers to pitch; 'loud' to intensity; 'rapid' to speed; 'staccato' to form; 'querulous' to expression; and 'rich' to timbre. As a working basis of possible value to others in their bird utterance work, I submit the following alphabetically arranged, incomplete (the italics are mine) list of Bird Sound Designations." Here follows a list, which presumably is only a beginning, of 500 "bird sound designations." When the average ornithologist is doing his best to master German, French and other languages in order to enlarge his field of literature, his life will surely prove too short to contemplate the use of this means of recording bird-calls.

But this author's system is based on an old and very sound principle. When the small boy comes home and says he has heard a bird singing "cuckoo" he is unconsciously doing the logical thing and applying phonetics to his description. The pros and cons of phonetic renderings have been discussed fully a great number of times and while there are objections, they are not as numerous or as weighty as those against musical and other notations. Any modern book that attempts to give bird-notes makes use of the principles of phonetics. But so far as I am aware no other author has gone so far in their application as Mr. Hunt, and he, so it seems to me, has gone beyond the limits of practicability.

It appears to me that an accurate rendering of bird-calls, with the means at present at our disposal, is entirely impossible. A bird's song cannot be stated in terms of the piano, or violin, or any other man-made instrument, even when one's knowledge of music is sufficient to think and write in those terms. The human singing voice is no better. The speaking voice in many respects is preferable to these. It has the added advantage that it can be written down in terms intelligible to everyone. If one compares descriptions in German, French and English books of some well-known and common bird-song, one realises more easily how near perfection a phonetic rendering really comes, for in the three
languages the descriptions are so alike as to be recognizable without difficulty. German, however, it must be conceded, has a useful accession in its modified and lengthened vowels. The simplest way to discuss the advantages of the particular method I use is first of all to describe it. I employ four symbols to denote accentation. They are these, (A) \[^{\text{U}}\] for a very brief note; (B) \[^{\text{—}}\] for a longer one, but both without particular accent; (C) \[^{\text{-}}\] for a short note well accented; (D) \[^{\text{——}}\] for a longer one, also accented. If the notes are uttered in continuity, I indicate it by joining the accent symbols with a thin bowed line. Under the symbols is a phonetic rendering of the call. Thus the call of the Cuckoo becomes

\[\text{“cuck-oo,”}\]

because both notes are accented, but the last slightly more than the first. But this does not terminate the description. As it stands it gives a more perfect idea of the call than the usual description, but not an adequate one. The phonetic rendering itself, since “oo” is lower on the scale of vowel sounds when arranged in descending order than the vowel sound of “cuck,” indicates a dropping in pitch between the two syllables, but no more. But it so happens that the interval between the syllables of the Cuckoo’s call may vary from a minor third to a fifth. No hint of that is conveyed in the ordinary description or in mine as given above. A musician would employ his knowledge of musical notation and put on to paper a fairly accurate representation of the various possibilities, but only fairly accurate, for birds do not recognize the intervals of human musical script. They may produce three notes in the space of our two, etc., so that even the trained musician may not be able to indicate the interval correctly. But as already pointed out, musician-ornithologists are comparatively so rare, that their methods are in any case not of general value.

The system I am here advocating, while less accurate than that of the musician, has at least the advantage that every one can not only read it but write it as well. I merely drop the accent symbol of the second syllable below the level of the first, varying the length of the drop to suit each case. The call of the Cuckoo would thus appear either as:

\[\text{“cuck-oo, cuck-oo” or even “cuck-oo”}\]
Anyone glancing at such a description would gather many more facts than could be conveyed by any other equally simple means. Accentation and relative pitch are suggested as well as the usual phonetic values. Actual pitch is appreciated by so few that to think out some way of showing it would merely add a useless encumbrance. The fact that the notes of a Warbler may be four or five octaves higher than those of an Owl, never enters the heads of most ornithologists. They know the kind of note an Owl produces, and when the phonetic rendering of an Owl’s hoot is put before them, the idea of true pitch never bothers them. It can quite well be omitted. Timbre cannot be demonstrated by any means yet invented, and for much the same reasons it also can be ignored. The most essential facts for practical field use are thus included.

I use this method only for calls and short songs. It could conceivably be used for lengthy ones, but it would become unwieldy. In view of the fact that the majority of field-workers remember songs rather by general impression than by feat of memory, to use it for these would be superfluous.

The call of the Cuckoo late in the season is modified to "cuck-cuck-oo." As written here there is no suggestion that there are two common alternatives, but if they are described thus—

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"cuck-cuck-oo" and "cuck-cuck-oo,

this feature immediately becomes evident. The significance of the difference both here and in the case above may prove, upon investigation, to be of considerable importance, when such a graphic description as this would be of particular value. In the tremendous volume of Cuckoo literature that has accumulated in the last few years, cock birds have been but little considered, and it is well within the bounds of possibility that some development may direct attention to the habits of the males. Selected individuals might in that case figure prominently, just as certain females have loomed large in recent discussions. If the difference of interval in the common call proves, as I suspect is the case, to be individual, it would be a useful means of identifying particular birds. I have heard three different intervals in a single morning in circumstances that made it more than likely that they were produced by three separate individuals.

A graphic indication of the kind suggested here, expressing nothing more than relative values, would be far more useful
for field-work than a more accurate musical version that only a small percentage of observers could hope to employ. Its scientific value may be nil, but its practical value is very great. Some years ago, when new to Canadian birds, I was collecting for a few weeks in forest country so dense that many birds were heard but not seen. The majority were finally collected after much arduous effort, and over a hundred certainly identified species recorded. But there was one bird with a call entirely unknown to me and of such peculiar timbre that even its group could not be determined by its call. I sent a graphic description of the type above to a well-known Canadian ornithologist. I gave no hint of the actual pitch or timbre but merely accentation and relative pitch for the various notes, accompanied by the usual phonetic description. I got my identification by return. Three years later, a thousand miles further west, I again heard the call. This time I managed to collect the singer. The identification was perfectly correct. I mention this incident, not only because it demonstrates that all the essentials for practical purposes are included, but also to illustrate the fact that it is intelligible to those who see it for the first time.

I know no one who has tried this system once who has not continued to use it. A knowledge of bird-calls is invaluable in the field, a fact so well known to all ornithologists that it does not require elucidation. But when one has heard an unknown call only once it is all too easily forgotten again shortly after. Reference to such a graphic description, however, recalls the notes so vividly, that a song once heard and put down can be recollected quite clearly years after.

In one’s own jottings one can vary the accentation symbols in length, weight, curvature, etc., to indicate all kinds of delicate shadings; one can make small additions in a second that can convey a great deal of information. Two particularly useful additions that appear frequently in my own notes are, \(<\) to indicate a swell, e.g., over the trill of the Wood-Warbler \((Phylloscopus sibilatrix)\) and \(\uparrow\) to indicate that the note is slurred up, as in this call of the Curlew \((Numenius arquata)\):

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\(<\uparrow\\n\)
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"cur-ee."

Moreover, if necessary, one’s own notes, if based on the simple general principles here outlined, even if embellished with personal modifications, could be interpreted by others.