

A NUPTIAL SONG-FLIGHT OF THE  
SHORT-EARED OWL.

BY A. DAWES DUBOIS.

A CALM evening on the Great Plains is remarkable in its possibilities for the transmission of sound. At my cabin in Teton County, Montana, it was nothing unusual, during intervals of calm, to hear the puffing of a locomotive on the railroad seven miles away. It was under such conditions, about 9:30 in the evening of the 31st of May, 1915, that I first heard the "tooting-song" of the Short-eared Owl (*Asio flammeus*). My field notes describe it thus: "'Toot-toot-toot-toot-toot'—etc., repeated fifteen to twenty times, at the rate of four toots per second, in a low-pitched monotone." It was dark at that time of day and of course impossible to trace the novel song to its source. The same sounds were heard again the next day but without leading to a solution.

On the 5th of June, while inside the cabin, I heard the tooting before dark (8:40 P.M.) and went outdoors to listen, and to follow it, if possible, to some conclusion. At first it seemed to proceed from the south-east but my movement in that direction brought me no nearer. It seemed then to come from all directions. Finally, upon gazing upward, I discovered the Owl directly overhead, and for a time was able to watch him, with the field-glass, in the fading light. He was flying at a great elevation; so great in fact that it was difficult to see him at all without the aid of the field-glass. For the most part his flight was with slow, silent flapping wings, although he sometimes soared. His course led in easy curves which kept him in the same general locality. His song, on this occasion, was made up of 16 to 18 toots. Now and then he made a short slanting dive which terminated with an upward swoop. The dive was accompanied by a peculiar fluttering noise; a sound of which I had been conscious for some time before I associated it with the Owl. It was such a sound as might be produced by a fluttering small bird imprisoned in a box; or by the flutter of a small flag in a very strong wind. Remembering that

sound travels more slowly than light, I believed that the fluttering ceased before the upward swoop began.

The 7th of June brought the coveted opportunity to watch the tooter in broad daylight. The sun shone upon him and enabled me to solve the mystery of the "fluttering flag." When the Owl began the short dive he brought his wings together beneath him, stretching them back posteriorly and striking them rapidly together with short clapping strokes. The dive ended simultaneously with the clapping, when the bird spread his wings, abruptly and noiselessly turning his course upward with a swoop. The clapping was clearly visible with the field-glass and the fluttering sound produced by it was distinctly audible. He seemed to be applauding his own aërial performance.

Having thus become familiar with the sound I often thereafter heard it, both in the daytime and after dark. Presumably such a song-flight is a ceremony peculiar to the breeding season. The next year I first heard the flight-song after dark on the 17th of March. Doubtless the birds had then just arrived at their breeding grounds, for I had not previously seen them there that year. Such records as are available for this locality, however, indicate that actual nesting does not begin until the middle of May or first of June. I have witnessed the high flight and heard the wing-clapping on the 23rd of June, when the Owl which executed these evolutions was known to have young in the field over which he was performing. On that occasion I had examined the brood of four young Owls (in a wheat field), and had seated myself perhaps a hundred yards away to watch the maneuvers of their parents. One parent disappeared as soon as I left the young and was probably on the ground with them but the other flew and soared in circles above me, gradually climbing until he was at a great height. During the time that I watched, he twice indulged in wing-clapping. Having thus spiraled upward above me to his maximum height, he shifted his center of flight to a point more nearly over the nest, at the same time reducing his elevation.

During four years of observation, March 17 was the earliest and August 28 the latest of my records of occurrence of the Short-eared Owl at this place. The birds were not present in the winter.

It may not be amiss to append to these observations a review of

all other vocal sounds which I have heard produced by this species in the same locality. The list divides itself naturally into two groups. The first group, which, for want of a better term, may be designated as "nurture signals," includes only the sounds uttered by the parent while on her nest, during the nurture of young. These signals were observed from a tent-blind close to the nest, while the parent was caring for fosterlings, the items being abstracted from a narrative account previously published.<sup>1</sup> It should be mentioned in connection with those observations that the Owl uttered no vocal sounds at the nest during the period of incubation.

The second group, herein designated as "cries of remonstrance," refers to the cries used by the adults when their young were threatened or approached by an intruder. The data for this second group represent observations at or near three nests.

#### NURTURE SIGNALS.

(1) A low "cuk" somewhat similar to the cluck of a hen; this was a call note or a note of reassurance to silence the chicks when they cried.

(2) A rapid series of "cuks," merging into something like the alarm signal of a domestic hen and continuing to increase in pitch and frequency to a termination of very high-pitched, rapidly uttered notes.

(3) A sudden alarm note, uttered as a warning to young (chicks) to keep quiet, when danger seemed to threaten from the air above them.

(4) A very high-pitched note; in reality a series of squeaks which accompanied the rubbing of chicks' backs with bill or fondling them against face. Seemingly an invitation to take food and an expression of affection.

(5) A hiss, or soughing sound, produced by expulsion of air through the open bill (not by vocal chords). An expression of displeasure, admonition, or defiance.

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<sup>1</sup> 'The Short-eared Owl as a Foster-Mother,' by A. D. DuBois, 'Auk', July, 1923.

CRIES OF REMONSTRANCE.

(1) Barking notes, uttered while flying over or around the intruder; the repetition several times in succession of a single syllable.

(2) A sort of purring growl which suggests the syllables: "ma-yow," or "keyow," sometimes drawn out to "ka-a-yow," with an impressive accent on the last syllable. It is uttered either from the air or from the ground. These cries have a rather ferocious sound.

(3) A prolonged, very high-pitched squealing cry (a sham cry of distress), uttered while on the ground, either standing or floundering in simulation of injury and helplessness.

The young of the Short-eared Owl also are capable of vocal expression. The four Owlets previously mentioned (June 23) were in various stages of development, the oldest being quite large and covered with thick wooly down, while the youngest, with its eyes not fully opened, was apparently not many days out of the shell. The older brothers were silent but the "baby" of the family uttered a little cry which sounded remarkably like the distant "peenk" of a Nighthawk.

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A STUDY OF THE HOME LIFE OF THE NORTHERN  
PARULA AND OTHER WARBLERS AT HATLEY,  
STANSTEAD COUNTY, QUEBEC, 1921-1922.

BY HENRY MOUSLEY.

*Plates XIX-XX.*

IN the opening pages of his monograph on 'The Warblers of North America,' Dr. Chapman points out that they have been described as "our most beautiful, most abundant, and least known birds." The above work was published in 1907, and so far as I know the description holds good today, for I believe it would be difficult at the present moment to find a really intimate study of the home life of any Warbler. This is not to be wondered at, for