

MRS. NICE ON TERRITORY

By FRANCIS H. ALLEN

THE editor of *Bird-Banding* has asked me to review Mrs. Margaret Morse Nice's "Les Oiseaux et le 'Cantonement'" in the form of a body article, and as he knows the ways of this particular reviewer, I assume that he does not expect a mere outline of the paper with some words of well-deserved praise and a minor criticism or two. At any rate, I am taking the opportunity to make a few remarks—probably of no particular importance—of my own on this interesting subject of territory in bird life.

Under the title mentioned, the French ornithological journal *Alauda* printed in its July-September number of 1934 an excellent summary and critique of the territory theory by one who is eminently fitted to discuss this subject, not only as a student of the literature but from her own long-continued observations and experiments. I judge that Mrs. Nice originally called her paper "Birds and Territory," but the French translators, Georges de Vogüé and Henri Jouard, consider that *canton* and *cantonement* render our word "territory" in its concrete and abstract senses better than the more obvious word *territoire*. I say she is eminently fitted to discuss this subject. She has, indeed, discussed it at some length before—in her paper "The Theory of Territorialism and its Development" in *Fifty Years' Progress of American Ornithology*, issued by the American Ornithologists' Union in 1933—and the present paper reproduces a large part of the earlier one word for word. The chief additions in *Alauda* are further details of the history of the theory and abstracts of, and comments upon, the views of such authors as E. M. Nicholson, Lord Tavistock, David and Lambert Lack, and Rudolf Zimmermann, and it is convenient to have this interesting summary.

It is unnecessary to give a detailed outline of the whole paper. Three or four of its twenty-three pages are devoted to an account of the author's observations of more than three hundred adult Song Sparrows over a period of five years, and there is a bibliography of a page and a half. Mrs. Nice sums up, as she did in *Fifty Years*, with "Territory implies in the male bird isolation, advertisement, fixation, and intolerance. Where these four aspects are not present, the bird does not truly hold territory. . . . It may be that the food aspect of territory has been overemphasized, and that sex jealousy in many cases plays a definite part." (I use the words of the earlier paper. They are translated exactly in the French version, except that the last three words appear as "un rôle décisif," which I suspect may be putting it a little stronger than Mrs. Nice intended.) She concludes the paper with a pertinent quotation from T. T. McCabe's admirable anonymous critique hidden away

from most readers in the multigraphed pages of *News from the Bird-Banders* (1932).

Like Mr. McCabe and many other ornithologists, Mrs. Nice is not disposed to go all the way with Howard. She denies "territory" to those birds that defend a nest spot but feed in common and to such birds as the Cowbird (*Molothrus ater ater*), which pass the breeding season in more or less definite areas without attempting to defend them. One generalization given in *Fifty Years* I do not find in the *Alauda* paper, though it seems to me rather important: "The typical territory holding birds are some of the hawks that make themselves conspicuous by special flight, shrikes and kingfishers that perhaps do the same by their bold markings as well as their loud cries, and the majority of passerines that advertise themselves by song."

A recognition of these limits to the operation of this habit is necessary, for territorialism is by no means universal among birds. There are exceptions even among the passerines, as Mrs. Nice points out, instancing strong-flying and wide-ranging birds such as the Swallows, Swifts, and Starlings, and birds such as the American Goldfinch that feed their young with seeds, the *Paridae*, social birds like the Bronzed Grackle and the English Sparrow, and others. A partial exception, at least, would seem to be the Eastern Bluebird (*Sialia sialis sialis*). I do not know whether or not anyone has worked out the territorial habits of that species, but it seems to be well known that in many cases the Bluebirds do their courtship in migration and arrive on their breeding-grounds in pairs.

"Song," says Mrs. Nice, is "most intimately bound up with territory." But the regular standard song, which some "territorialists" appear to think confined to the territories, is in many cases rendered exactly and vociferously on the migration far from the breeding area. This fact seems not to have impressed itself very strongly on the British ornithologists, probably because the number of transient species passing through the British Isles is so much smaller than that of our American migrants. This migration singing provides no support for the theory that these standardized songs have been evolved for use in holding territory, but neither does it invalidate it, since this particular response to changing conditions in the glands may well occur in advance of a necessity for its use. Whatever our view of the use and meaning of bird song may be, we need not insist on confining it rigidly to any particular season or situation.

Probably few ornithologists now deny the existence of the territory-holding habit in a large proportion of the passerine birds or deny its usefulness to the several species. Probably few fail to recognize the value of song, standardized song, in advertising proprietorship of territory. That songs could have developed into what they are simply through their use as advertisement is, of course, another matter, and a theory that some of us cannot yet

accept. Knowing, as we do, that practically every least call-note is diagnostic to human beings, and believing that such notes must be still more easily identified by other birds of the species, we cannot escape the belief that single notes frequently uttered in loud tones from commanding positions would suffice for advertising purposes and that there is no reason to suppose that anything more elaborate would be needed.

An alternative theory is that all bird song has evolved through its attractiveness to the females. Howard himself believes that female birds are attracted by the songs of the males but considers that the chief value of the songs lies in warning away rival males. He has little to say of their *origin*. Origins are a difficult subject, but it is impossible to evaluate the relations of song and territory without some consideration of the probabilities of their evolution. It may be admitted, however, that territory has had its effect on song. Other writers, notably Aretas A. Saunders (*Bird Song*, 1929), have shown the probable simplification, specification, and standardization that has gone on in bird song to fit it for territorial use, and Mrs. Nice has seen this in process in the change from the formless warbling song of young Song Sparrows to the regular adult song in February.

As an illustration of how Howard's theory has modified our thinking about bird song, Mrs. Nice quotes a "pre-territorial interpretation of the meaning of the Song Sparrow's song" in Dr. T. G. Pearson's *Birds of America*, in which the author speaks of the Song Sparrow's "little prayer of thankfulness" and quotes John Burroughs on the song's expressing "simple faith and trust." I really must protest. This is poetry that never pretended to be science, and it never represented the serious views of American ornithologists. Writers of popular bird books will go on writing in similar vein in spite of Howard and Mrs. Nice. But I suppose one must not take Mrs. Nice's little joke too seriously!

Mrs. Nice calls attention to the possibility that the food aspect of territory has been overemphasized and that sex jealousy may in many cases play a definite part. But may it not *always* be a matter of sex jealousy *and* food? On this point we may take a leaf from Howard's book and consider the whole situation as a unit. So regarded, sex jealousy, instead of being a separate factor in the situation, becomes a means of securing the necessary territory to provide food for the young. I do not see how sex attraction and sex jealousy can possibly be eliminated from consideration in any question concerning the perpetuation of the race.

Let me make two more suggestions that may be of use in answering objections to the theory. The fact that, in some cases, when the young are hatched and require to be fed, birds no longer keep to their own territories nor defend them does not mean that the territorial habit breaks down at the crucial moment. It may have already served its purpose in effecting the proper distribution of

pairs and their broods. So, also, in the case of many—perhaps most—territorial birds, which cease singing either entirely or partially on the hatching of the young, it may no longer be necessary for them to advertise themselves, a respect for the limits of each territory having already become established in the routine of all the neighboring rivals.

This paper, as I was afraid it would, has turned into a rather rambling discourse on a few aspects of the territory theory. If anything, or all, that I have put forward here as my own very modest contribution has been said before, and either approved or disapproved, it must be imputed to the fact that I have overlooked it in my study of the literature or else have forgotten it. The few little points made seem so obvious that they may well have occurred to others. Let me now return to the original purpose of this article and recommend all its readers who have not already done so to obtain and read Mrs. Nice's very sane and thorough discussion of the theory, either in its later enlarged (French) version or in that of 1933.

West Roxbury, Massachusetts.

GENERAL NOTES

Eastern Purple Finch Recoveries in and away from the Eastern Part of the Upper Peninsula of Michigan.—To get any considerable number of recoveries of any of our small non-game birds requires much banding, and the smaller and less conspicuous the bird, the fewer the recoveries. To illustrate: up to January 1, 1935, at my station at Sault Ste. Marie, Michigan, 2570 Eastern Evening Grosbeaks have been banded and 15,960 Eastern Purple Finches, yet, from distances of over one hundred miles I have had 30 recoveries of the Grosbeaks and only 17 of the Purple Finches.

The average of distant recoveries to birds banded:

Eastern Evening Grosbeaks	1 to 86
Eastern Purple Finches	1 to 940

From Giddings, Texas, my most southwesterly Finch recovery (1350 miles from place of banding), to Tatamagouche, Nova Scotia, my most easterly Finch recovery (1000 miles from place of banding), the distance is 1650 miles.

Following are the Eastern Purple Finch recoveries from a distance of over one hundred miles, in and from Sault Ste. Marie, Michigan, and vicinity reported to January 1, 1935, with accompanying map.

BANDED BY M. J. MAGEE
AT SAULT STE. MARIE, MICH.

C127,031, young of year
July 27, 1932
190,654, young male or adult female
May 26, 1926
F61,858, young of year
Sept. 20, 1931
118,680, young male or adult female
Sept. 4, 1923
160,792, young male or adult female
May 29, 1925
A141,535, young of year
July 31, 1929
B98,507, young male or adult female
May 16, 1929

RECOVERIES

Trapped, Oct. 13, 1933, Michigan State College, East Lansing, Mich. (1)
Shot by boys, Feb. 23, 1927, Bonnierville, Ky. Reported by B. O. Gibson (2)
Found, Feb. 2, 1932, Greenville, Ky., by M. Davis (3)
Found dead, May 1, 1924, near Sparta, Tenn., by Mrs. Della Davis (4)
Caught, Jan. 1, 1927, Evansville, Tenn., by Pat Turner (5)
Found, Jan. 6, 1932, Brownsville, Tenn., by E. Thomas (6)
Caught, Jan. 11, 1931, Gorman, Tenn., by I. Palk (7)