

thus affected. His conclusion is apparently based upon the well known and indisputable fact that birds are harder to find during the breeding season than at other times. It must, however, be remembered that for each pair of breeding birds observed, there is somewhere about a nest full of young that are not seen at all. These young are of as much economic importance in reckoning population as the adults, and as such must be taken into consideration. On the whole, I doubt very much whether the bird population in the breeding season is any less per given unit of territory than at other times.

That migration is caused by a natural dispersal of the adults during the breeding season must be admitted. But this is begging the question. Migration is a dispersal; and conversely, this dispersal, as it manifests itself, is migration. The author fails to explain the cause of the natural dispersal. The object of this scattering may be seclusion, either for privacy or safety. If for privacy, it seems to defeat its own ends when such birds as the herons, swallows, and like gregarious nesters congregate in great communities to perform their marital duties. If safety is sought, it presupposes that all the safe nesting sites are monopolized by other species and the migrants are crowded out.

In our own country, we can readily see that but an infinitesimal fraction of possible sites are thus occupied. How rare it is for a nesting place to be used a second time by different individuals,—except in the case of woodpeckers' holes, where it is obvious that the supply is limited,—any field worker knows. If desirable forked branches, etc., were at such a high premium, this would occur frequently. If, then, the above is true in our own country, how much more must it be true in the tropical stations, where, though the population of both birds and their enemies is greatly increased, the luxuriant vegetation affords an infinitely greater number of desirable sites for nesting. Crowding in this sense seems impossible.

That individual birds cannot be driven from what they regard as their proper stations, may possibly be admitted; but that species cannot (when the adverse changes in surroundings take place gradually enough), is absurd. As far as I am aware, there are three principal ways by which geographical distribution can be