

November 3, 1941

Dear Jeffreys,

Thanks for your proofs returned. About the stability in numbers of different species, ~~the~~ though we know rather little about absolute numbers, yet I think I follow you, that the stability of relative numbers is rather remarkable. I have only two suggestions.

One is the averaging effect of a considerable habitat, in parts of which the surviving young may be much more numerous than the number of older birds dying, while in other parts the reverse is the case. This must be fairly ^{ly} regular so if the numbers surviving depend very much on the fortunate timing of events, e.g., a period of cold winds and much rain might come before incubation starts and do no harm, though it is deadly if it occurs soon after most of the young are hatched. Consequently the same set of cyclic ^{or} disturbances must have very different effects on the birds breeding in different latitudes.

With birds, however, unlike mammals, some of which do display a catastrophic swarming, the grand stabilising mechanism seems to be provided by the consciousness of territory as a possession, which they almost universally display in the breeding season. It is to be presumed that what the cock, and later the pair, recognise as a

feeding territory consists of an estate ^{to} adequate, when everything is

taken into account, to supply the peak demand of the family, and that different species are generally sufficiently different in their requirements to ignore each other in parcelling ~~it~~ out the world every Spring. For this reason, so long as a robin's ideas remain the same as they were in the last century on what constitutes an adequate territory, so long will the number of robins nesting ~~agree~~ every year be fixed, or at least determined, by the area of ecologically suitable ground, orchard, garden, etc, available for them to occupy. If this is so, a considerable increase in the adult population may be accompanied by only a small increase in the number of breeding pairs, and, of course, a frightful lot of fighting.

I fancy the Ornithological Institute at Oxford has been doing a good deal to get objective estimates of densities and total numbers, and I hope, in view of what you say, that, either in collaboration with them or on your own, you will be able to follow the course of the changes going on with the missel through.

Yours sincerely,