

January 13th, 1938

Dear Alexander,

I have at last found a little time to get back to the bird work, and to compare variabilities with the abundance data which you were good enough to put together, I suppose now as much as three years ago.

There is, undoubtedly, an effect of the kind I was inclined to anticipate: but, before sending you the results, there are a few supplementary questions which I should like to put to you. Estimates of relative abundance must be so much a matter of personal judgment that I am sure you would prefer to give your opinion on each point before seeing how it would affect the result. This is especially important as, although the commoner species have, on the whole, come out more variable than the rarer, the effect is so small, compared with existing differences in variability, within each group, that it would be easy to enhance it considerably by displacing some of the abundance estimates, no more than you would, perhaps, be persuaded to. In fact, some such modifications may be right and be adopted later, but I must get, first, clean evidence

of the general tendency. Now for my questions:-

I. In the Fringillinae your first two are the Chaffinch and House Sparrow; your next six Goldfinch, Tree Sparrow, Linnet, Greenfinch, Redpoll and Cross-bill. I have data, not for the Redpoll, apparently, but for the Lesser Redpoll, and I have two different series for the English Cross-bill and the Scottish Cross-bill. Your rarest four are the Hawfinch, Bullfinch, Liskin and Twite. Now, tell me how I should arrange the 13 lots that I have.

II. Among the Picarian birds you give me the Great Spotted Woodpecker as commonest, and the Wryneck and the L.S.W. as less common. Am I to do anything about the Kingfisher, Nightjar and Swift?

III. I seem to have an extra Grebe, namely a black-necked Grebe, a little bigger than the little Grebe. Can I place this in your classification which makes the little Grebe commonest, the great crested Grebe and the red-throated diver next, and the blackthroated diver rarest?

IV. I have also a number of local sub-species, such as the Irish Dipper, Shetland Starling, Shetland Wren, and St Kilda Wren. If treated as species, I suppose some of these would be rather rare, though I do not know even this. If they are not, probably, good

species. I doubt if my separate data for them are worth anything, as a local group subject to local selective action, but with a constant infiltration of foreign blood might, for that reason, be more variable. So let me know if you think any should be included as separate species. You will notice that they are all of species without near relatives in this country.

Here are some on which I do not want you to revise your opinion, at least until I have made a complete test with it as it stands, but which may interest you none the less. First, I will list ten birds which, although rare, have relatively high variability

Rare birds, High Variability

Grey-lag Goose	+38
Stone Curlew	+28
Sea Eagle	+28
Golden Eagle	+19
Nightingale	+25
Storm Petrel	+24
Hawfinch	+22
Siskin	+21
Wood Warbler	+20
Grasshopper Warbler	+20

Common birds, Low Variability

Redshank	+29
Kestrel	-12
House Sparrow	-27
Willow Warbler	-19

It has struck me that some of these stand out as exceptions for a reason that may be interesting, namely that it is possible that 10,000 years ago or so, before man had interfered so much with bird-life, the Goose, the

Eagles, the Stone-Curlew and the Nightingale may have been considerably commoner and the house-sparrow considerably rarer. The variability would not, I think, respond, except very slowly, to any such change in population.

I could now send the individual variabilities and summaries as soon as you cared to see them.

Yours sincerely

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Sea Eagle	+ 28	Kestrel	- 12
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Storm Petrel	+ 24		
Hawfinch	+ 22	House Sparrow	- 27
Liskin	+ 21		
Wood Warbler	+ 20	Willow Warbler	- 19
Crosskopper Warbler	+ 20		

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