

BOARD RESIDENCE.

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INVERNESS

Dear Dr. Fisher,

You said you might possibly be able to find time to answer specific questions about my Galapagos data. I enclose a specimen set of figures for one species, and should be extremely grateful if you would answer the following queries:

1. What is the smallest number of measurements for which it is worth calculating the standard deviation ?

2. To how many places of decimals should one give the means and standard deviations. (Culmen and depth of beak were measured to 0.1 mm. and wing to 1.0 mm.)

3. The data provide an opportunity to test Sewall Wright's view that small isolated populations are less variable than larger populations. One can assume that the populations are proportional in size to the size of the islands (details in the table). By casual inspection, it seems that the smaller more isolated populations tend to be less variable. But can one formulate this more precisely ? If so, could you outline a method for me (bearing in mind I have no mathematical training).

4. Since I will be discussing ~~both~~ differences

in both mean and standard deviation when comparing populations of different islands, should I include in the table the standard error for each of these ? Or could one leave these out since they are readily calculable from the data provided ?

I am sorry to trouble you with such elementary queries as nos.1,2 and 4, but I have no previous experience of this kind of work.

Since I discussed my data with you, I think I have found a good reason for the frequent disappearance of male secondary sexual plumage characters among land birds of oceanic islands. Such birds have got away from all closely related species. I presume that female birds frequently utilise male secondary sexual characters when pairing up, to distinguish males of their own species from closely related forms. Hence apart from any functions in courtship display (which is as well developed on oceanic islands as anywhere else), secondary sexual plumage characters have survival value in reducing the frequency of hybridisation. But there are normally no closely related species on oceanic islands, hence no chance of hybridisation, and this function of secondary sexual plumage disappears. I think you mentioned to me in discussion that Pheasants show the opposite of this, an extremely elaborate differentiation of male plumage characters correlated with an abnormally high frequency of hybridisation owing to primitive pairing habits.

Yours sincerely, *David Lack*  
David Lack

I am at the address given until April 30th, after which at Dartington Hall.