

May 23rd 1948.

My dear Ron.

I have been away for three days inspecting a colony of Melitaea aurinia in which a big fluctuation in numbers is apparently taking place, so the letters of Friday and Saturday have had to await my return today (Sunday).

First, I think the method of presentation of the icarus data (returned herewith) is most clear and helpful. I am sure it would be excellent to set them out in this way.

I am interested to see that you are using different death-ratios for the two sexes, and this must surely be in accord with reality. The two sexes are indeed different populations, with different habits and times of emergence from the pupa (the ♀'s

on the average appear the later) so that they have a different Ecology. There is indeed every reason for thinking the two sexes may have different lengths of life.

The calculations show that at first the ♂♂ outnumber the ♀♀ and that later the ♀ numbers rose rapidly. This is fully in accord with observation and general Expectation. As you say, the estimate for ♂♂ for the last two days must be heavily in excess of the facts. Indeed it depends upon a single recapture, so that the error involved must be very great.

The only factual points which need raising are these:—

Area I ♂ for the 23rd.

You give 5 marks recaptured, which accords with my data. There are as follows:—

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<u>Date.</u>	<u>Sex.</u>	<u>Marks per specimen.</u>	<u>Dates of previous capture.</u>
23 rd	♂	1	22 nd
"	♂	1	22 nd
"	♂	1	19 th
"	♂	2	19 th & 22 nd

This seems to give for total age of marks caught 11, but you have 9 for this entry. I wonder if I have set down the data incorrectly here.

The only other points relate to the days on which two ~~of~~ samples were taken (28th & 29th). I have set these data out more fully on a separate sheet, to make them clearer.

The results accord perfectly with your columns 4, 5, 6. Yet they do not quite seem to fit your column 2. I see this works strictly as indicated new marks released. Thus on the 22nd (♂) 41 unmarked were caught of which 40 were released, while 3 previously marked (after being marked)

one caught- (and released). This gives you figure 43.

However, on 28th morning (you 28A) ^{unmarked} 28_h one caught- & 26 released (after having been marked) while 1 previously marked was ^{released} caught-. This makes 27 new marks (against- you 28).

You will see there are other similar corrections for these two days (28th & 29th only) and for Column 2 only. I am afraid I did not set out well what had happened in regard to these days on which morning and afternoon samples were caught-. I think this will be clear from the sheet- of figures I now send.

So I think the calculations are splendid, and exactly set forth what is needed. And thank you, my dear Ron, for all your work and interest.

Yours truly,
Henry

I am of course relying on Matt's calculation (however) as requested by you last evening.