

[at June 1948]?  
JL

My dear Ron,

I have with the greatest interest been going through the calculations based on one of the P. icarus data that you have so kindly made for us. It does seem to me that they suggest several points of real interest.

We are so completely in the dark in regard to relative survival in nature that it would be of much value to know that these ♀'s are here eliminated less than the males. Unfortunately the ♀ data are only at all adequate for one area (I).

Again, the numbers of ♀'s are so poor that we have comparisons between areas only for the ♂. Here it does excite me to note that, small as the difference is, survival is less in the very little colony, whose numbers can hardly be thought to

reach 400, than in the two other areas  
in which several thousand insects must  
emerge during the season. This gains  
strength from the fact that it is in accord  
with the 1946 justina data and with our  
own theoretical expectations.

I imagine that so many  
uncertainties are involved that the error  
to be attached to such comparisons is quite  
impossible to state quantitatively. Also that  
the value of such comparisons ( $\sigma^2$  v.  $\sigma^2$

Survival; Survival in small v. large colonies)  
greatly increases  
L of it - we found that several different  
estimates all vote in the same direction.

I have herewith set out some  
calculations in the form in which I have been  
looking at them. I have added actual age of  
marks  $\div$  expected age. I then the population

Estimate follows the line we thought was unreasonable: that the largest daily estimate of 4 might be doubly in the correct neighbourhood.

I believe it would be very valuable to try to get a further set of on icarus from these same colonies data when is are there this year. If one got the same type of answers, it would surely strengthen these conclusions immensely.

The data as at present obtained indicate roughly the sex-ratio of the insects flying. Do you think it would be worth to abandon this and make special efforts to raise the absolute number of ♀♀ to something like that of the ♂♂, so as to obtain enough marks recaptured on ♀ for the purposes of calculation?

It seems to me that would be worth  
doing.

Yours truly,  
A. H. H. H.