April 7, 1930.

Dear Charlie,

Things have turned up so fast since I wrote you that I am dashes off a line to bring things up to date.

I have been working on 95 x B13 @ D2

Among the regular numbers of aleurines shows 3 small broods

2-5, #2 + a small #3 with a large trimmed premum.

It is not much larger than no. 2 without the premum.

The score papers show a regular #1 x #4 but

A fairly large #2 + the abs. with the premum

Which is #3. I have enclosed a rather poor photo proof

of the score complement + 2 small aleurines.

...
If disjunction takes place, half the time it will produce 1 half off-springs, but we should expect 2 types of fertile spores and 4 types of sterile spores:

1. Small #3 + Large #2 = fertile regular spores $f + f$ or $\frac{1}{4}$
2. Large #3 + Small #2 = " interchanged spore $f + f$ or $\frac{1}{4}$
3. Large #3 + Small #3 (as #2) " $f + f$ or $\frac{1}{8}$
4. Small #2 + Large #2 (as #3) " $f + f$ or $\frac{1}{8}$
5. Large #3 + Large #2 " $f + f$ or $\frac{1}{8}$
6. Small #3 + Small #2 " $f + f$ or $\frac{1}{8}$

If all the spores undergo the first division then these should increase the above 6 types in the proportions given.

I took a late stage, about second division, of some spores at this stage the fertile and sterile spores are clearly distinguishable. I counted the number of sterile spores with 2 nuclei, 1 nucleus, no nucleus, etc. 170 2-nucleated; 59 1 nucleated, 19 no nuclei. It looks as if among the sterile spores 3 of the combinations came thru the first division. One cannot. Of course we need more counts.
To check this I have looked at the four division figures and have found the normal complement i.e., short #3 + long #2 as in plus; the interchange facts correlate long #3 + short #2 (which is possibly slightly lighter #1) + long #2.

The steaks combination of two #3s, a long + short, the steaks combination of two #2s, long + short + #3; possibly the long #3 + long #2. The other combination - short #3 + short #2. I have not found it yet but really have not looked enough.

From this it looks as if #3 has received more than it has given in the interchange.

Among the 2 nucleated steaks groups some have a few long steak grains + some have none - there may be a numerical difference i.e., 14 or 12 grains with grains etc., which may be related to a certain combination.

Normal complement - Interchange complement. Steak complement with #3

\[ 1 \quad 2 \quad 3 \quad 4 \]

\[ 1 \quad 2 \quad 3 \quad 4 \]

\[ 1 \quad 2 \quad 3 \quad 4 \]
So much for the recent date. I have much to do yet but want you to keep up with all that is going on.

As ever,

Barb.