23

Baptist Southampton

~~Down,~~
~~Berkenham, Kent.~~

I. xiii

Aug ~~th~~ 15 1873

My dear Dr Sanderson

I am much obliged for your letter which has been forwarded to me here - but I return home next Thursday.

I assure you I felt quite guilty when I read in the Times your grand address on Physiology, at the thought that I had troubled you, at such a time, with my queries.

I quite understand what you

lay about near vigor.

I shd think that it wd be extremely interesting to ascertain whether there is any electrical change in the leaves of Drosera when they are excited; but I shd think Dionaea wd be much better for the purpose. As far as I can imperfectly make out the lower surface of the leaf in Dionaea, & of the tentacles (i.e prolongations of leaf) of Drosera is always in a state of tension, but is over mastered by the contraction of the upper surface alone.

Therefore I imagine that the

upper & lower surface wd
exhibit an electrical change (if such
there be) during the act of inflection.
Now Dionæa, from the large size of
the leaf & from the suddenness of
& quickness
the movement, wd be the best to
operate on. If on further reflection
you are willing to investigate this
point, I wd gladly send you by a
servant plants in good condition;
for I suppose you wd require to
have the plants at the Institute
& not at Down -
If you obtained any results, it
seems to me that it wd be a
remarkable discovery & well worth
pursuing. -

I had thought that it might be worth while to test Dionæa during inflection by the thermo-electric pile. A common thermometer gave no indication of any rise of temperature, so that it seems very doubtful whether the experiment wd be worth trying. If you find you have time & inclination to examine Dionæa or Drosera under the foregoing point of view, please do let me hear —

With many thanks yours very sincerely —

Charles Darwin