

G. M. D.
Duff

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Dear Papa

Yesterday I saw the last
Number of the Annals & Mag of Nat Hist, in
which Brady describes the Eutomotricians

He also gives a plate with figures of some
He does not however mention the two red
ones. I did not keep any of the
acanthometra of which you have mounted
specimens, I would like to have a specimen
if you could send it by post - with out too
much trouble.

I had intended after the Christmas holidays
to go back to the laboratory for 3 months, but
find that Mr Smyth's going to the echips will
cause his lectures to extend about two
weeks into February. The Natural history
goes on till about the end of January &
as soon as it is over the geology begins
so that for quite six weeks I will have
lectures from 1 to 3 Every day, & this would

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leave me only about 2 1/2 hours at
the laboratory every day, besides being busy
with other things. On this account I have
almost decided not to go back to the laboratory
at any rate in January. Perhaps by
going at the beginning of February (if there
was room) I might get two or perhaps
even three months, with two lectures a day
for about a fortnight, one lecture a day
for the rest of the month, & only preparation
for examinations the rest of the time, which
could be done in the evenings. Please
tell me what you think about it when
you write. I should like to get some
more practical chemistry it is so very useful.

Several of the fellows who were in the
laboratory last year have gone back this for
a few months, & are only doing their
second years work, which of course gives them
a good deal of time.

Frankland showed us a very curious
experiment the other day, I don't think he
showed it last year, but do not know if
it is new. Nitric acid hardly at all dissolves
iron (when concentrated) but throws it into a
"passive state". If a piece of sheet iron in

one vessel be connected with a piece of
platinum foil in another, so as to constitute
a sort of battery, (both metals being in concentrated
nitric). Then a wire led off from each metal
& the circuit completed by attaching the ends to
a galvanometer. The galvanometer needle
will show hardly any current. But if the
iron be taken out & scratched with another
piece of iron & then again plunged into the
acid, a powerful current ensues, which
however ceases in a few seconds the iron
regaining its passive state. The same thing
may be shown very beautifully, by allowing a plate
of iron to remain in concentrated nitric for
a time, & then plunging it into a sol of Cupric
sulfate. No copper deposits, but if the plate
is taken out, still wet with the sulfate
& scratched with a nail a coat of copper is
instantly formed on it.

I forgot to say that I got the Gazette which
you sent me, quite safely. I have read
most of your speech. Next mail I will
no doubt have an account of the Festival
which I hope has gone off well.

I see in this week's Nature, a report of the
proceedings of the Nat Hist Socy with an abstract
of some remarks of yours about the

earthquake. They were very interesting.
Please send one if they appear in the
Naturalist & copy if you have one to spare.

Dec 15.

The mails are late this week & I have
not yet got my letters, & so as there
is nothing more to say, I must conclude
by wishing all a very happy Christmas
& new year.

Believe me your affectionate

son
Geo. M. Dawson.