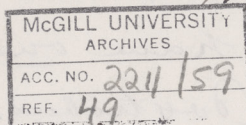


William



Duff Fallowfield. Dec 16/22



My dear Friend -

You will by this time have got No 8 - which you will at least find to be a somewhat seedy production; But I now want to tell you of our doings last autumn. In August I got Quary-men to excavate at Arran. More than a dozen large stems have now been dug out at Laggan Bay. Fragments of young twigs are the most numerous but along with these are branches of all sizes up to six or seven inches in diameter. All these are, without one solitary exception, Lepidodendroid. Not one solitary fragment of a Sigillaria

has been met with. We only
have one cone, which is a Septi-
Costrobus. - but Mr Binney has
already figured three cones from
the same locality all of which are
of parangial Lepidodendroid.

The young twigs show a section like 
The centre is a solid mass of barred
vessels - As in the Burnt Island
plant, as the stems enlarge,
this solid bundle opens out into
a ring  enclosing a pith, of
the true Lepidodendroid type. This
ring enlarges: with the increase
in size of the branch. Then I have
a large branch which has had a
mean diameter of about seven
inches. In it, the pith has en-
larged to nineteen-sixteenths of
an inch. whilst the vascular

Cylinder enclosing it is now ^{from} three-
sixteenths ^{to one fourth} of an inch thick. In
other words the medulla and its sur-
rounding non-exogenous vascular
cylinder are rather more than
 $1\frac{1}{2}$ inches in diameter - but
the whole is now surrounded by
a very thin exogenous layer
of radially arranged vessels, not
more than a quarter of an
inch thick. In the large
stems - two feet in diameter, the
non-exogenous ring seems to have
undergone no further increase in
size, but the exogenous cylinder
has now become seven-eighths
of an inch in thickness - its entire
diameter being nearly $2\frac{1}{2}$ inches.

You thus see that whilst the
entire vasculo-medullary axis is
larger than the last specimen

which you sent me, the inner
vascular ring is very much thicker
in proportion, than is the case with
your specimen; in which latter
its thickness does not appear to
exceed $\frac{1}{24}$ of an inch.

I think you will see that it is vain
and useless for Grand'Eury and our
French friends to contend against
this accumulated evidence that
true, indisputable Lepidodendra
have all the internal charac-
teristics of their Stigmarian stems.
If they still resist, I can only
conclude that no amount of
evidence will convince them.

We have evidently had at
Laggan Bay a grove of Lepido-
dendroid trees, with true Stigmarian
roots - (Stigmariae are abundant)
bearing Lepidostrobus, furnished
with macrospores and microspores.
Their entire bark, in all its

layers is wholly undistinguish-
able from that of the true sigil-
laris. A few ferns may have
grown on the spot - though I
have failed to find any. This
grove has been overwhelmed by
showers of volcanic ash which
probably came from the Craters
of Ayrshire. In many of the
stems we have only a cylin-
der of bark about an inch in
thickness; the cavity being filled
with volcanic ash. In some
others we have four or five
vascular axes mixed with pieces
of ~~stems~~ stigmarian axes, &
other vegetable debris. It is
evident that, by the decay of
the inner bark, the vascular axis
has become loosened - water

entering the bark-cylinder
has then floated these ~~axes~~
out of the stems to which they
belonged, leaving these ^{latter} empty;
but the stream having crossed
the path of some other empty
stem, has tumbled these ^{axes} ~~axes~~ headlong
into it, ~~along~~ ^{with it} with other rubbish
five or six together; Carpenters
had the idea that these were
young shoots that had grown
up in the interior of a hollow
stock! but this is out of the
question; first because of
their magnitude, which proves
that they have belonged to
stems of the largest dimensions

and serous from their
being absolutely & entirely
decorticated. what would not
have been the case had they
grown up under the protection
of a surrounding Cylinder. This
notion is about as unutterable
as would be a similar one
applied to your Pupa and
Periderpetons! - But Caruthers
has certainly a wonderful power
of blundering! - entre nous! -

I have not been able to
include these facts in my month
memoir - but I introduced them
into my Bakerian lecture, the
other Day. I shall have to
draw up a better memoir in
which I shall also deal with

The curious objects that Carruthers
has designated Triguairia & which
he believes to have been a
Radiolarian - but which I do
not believe. I think that in
all probability this will be the
last of the series - at all events
for some time to come.

And now after all this excitement
let me thank you for your
extreme kindness to my good
relations whose visit to Montreal
you made such a pleasant
one. They enjoyed it exceedingly
and were very grateful for
your genial attentions to them.
I only wish you would again
give me the chance of doing the
same to you, in propria persona
or in persona amicarum. Give my
kind remembrances to Harrington
& believe me as ever
yours
W. C. Williamson