

Aug 31 From Brooklyn

My dear Gray. I was very glad to receive
your Review of Deceitful a week ago.
It seems to me excellent & you speak out, I
think, more plainly in favour of derivation
of species than hitherto, though doubtfully about
natural selection. First to first, I am easy
about the second. Do you not consider such
cases as all the Orchids next thing to a
demonstration against Huxley's view of species
arising suddenly & spontaneously: it is
impossible to imagine so many adaptations
being formed all at a chance blow.
Of course Creationists would cut to the enigma!
What an insupportable water you are!
My dear Reviewer, supposing I were to attempt
them, would take me a month's work.
I have written twice, not very long ago,
& sent 2 copies of my Lincoln paper; but they
& letter were sent about time of

Sailing of Anglo-Saxon, & were perhaps
lost. I do remember in my letter telling
you how tight you were about fertilization
of *Cypripedium*. Of the species sent by
you. *C. aculeatum* alone has flowered
& has puzzled me. *Mitella*, alas,
does not look very healthy with all
my care. If you see & know me?
Sudden pleasure thanks his part, & why
for his interesting paper on *Pogonia*,
which I was very glad to read. -
To return to your Review: I was very glad to
see your Remarks in answer to Falsen
on *Phyllostachys*: I infer you cannot explain
why there are not intermediate angles. I
have been looking at Nageli's work on
this subject, & am astonished to see the

angle in which always to same in young shoot
the leaf-buds are first distinguished
as in full-grown branch. This shows, I think,
that there must be some potent cause
for those angles which do occur: I desire
then in some explanation as simple as
that for the angles of the Bees-eater. -
You allude to Lepaute's work: Alas! he
could not send me a copy of part of
letter from him, in which he expressed
strong belief that the 2. Solution was
ultimately to triumph in France, though
not quite ignored. - I have nothing
to tell you about my own drifts: I
work every day, that I can, on my big
book & am now at all causes of
sterility under domestication & cultivation.
I have got such an immense
collection of facts, the two weeks though
laborious & most interesting work, as I can

generally come to some sort of conclusion.
There never will be a man who will
read by his book: it will be a sort of
encyclopedia on special ^{cases.} facts. - I have
been looking again at the imperfect
flowers of Oxalis & Viola: I was entirely
wrong in supposing that in Oxalis the
perfect flowers received insect-aid for
fertilization; so this view is knocked on
the head. Viola, however, does receive
insect. I must yet stick to my opinion
that the imperfect flowers - ^{of Viola at least} deserve to be
ranked as something more than mere
precocious flowers. In the canine and
2 catkins are developed: the pollen-grains
are smaller - the pistil widely different in
shape: no nectar - appendages to the two fertile
stamens & no spur. - Remember, if you
can ^{get them} seed of *Campanula perfoliata* -

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I have been observing

common Broom: leaved

any orchid shows

prettier adaptation to
which are necessary for its fertilization:
insects, - The upper & lower
of Bees

surface of Thorax is quite

dusted with pollen, &

first the stigmas rub

the ^{upper side} ~~top~~ of Thorax &

afterwards is rubbed

by the lower side of

Thorax.

I suppose you are very busy.
& I suppose the whirlwind of
public affairs must waste
much of your time. I do
not think of writing to
you unless you have
any leisure; though a letter
from you is always a real
pleasure to me. I suppose
there are few human
beings in England who see
10 few persons out of their
own family as I do. —
Good night.

Yours most sincerely
C. Darwin



Darwin, Charles. 1863. "Darwin, Charles May 31, 1863." *Charles Darwin letters to Asa Gray*

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