

Rio de Janeiro ^{Darby}
Nov 3^d, 1880

Dr. J. W. Dawson;

My dear Sir,

Your favor of Oct 1st is just at hand and I am extremely obliged for your kindness in examining the specimens of limestone and your suggestions for further research.

Limestones in the geiss series are still but little known in this country and the exposures are in general very poor as the beds in all the places where anything resembling Egoon has been found are either untouched or only worked on the smallest possible scale.

I examined three localities on the San Francisco but only found serpentine in one, although I could

not from the unsatisfactory nature
of the exposure feel certain that
it does not occur in the others.
I am inclined to think however
that that of Crumman is lower
in the series than the others, I
could not see the rocks in im-
mediate contact with it but it
occurs in a region in which the
prevailing rocks are of a granitic
and syenitic character while the
other localities are in regions of
very schistose gneiss with garnets.

The Parahyba limestones are
also associated with schistose
garnetiferous gneiss which appears
to belong higher in the series than
that from Crumman, you will
remember that you had arrived
at the same conclusion from
an examination of the fossils.

I do not consider that the stratigraphy is sufficiently known to establish the fact but the observations certainly point that way and it is interesting to find that the nature of the rock points in the same direction.

I have recently learned of localities along the same line of strike as those I had examined in the Parahyba valley which gives an apparent extension of about 200 miles. If the bed is really the same in all these localities its persistence is remarkable considering that it is ~~a~~ only about fifty feet thick.

I have just returned from examining an exposure on the opposite side of the Serra do Mar from the Parahyba bed and from 3 to 5 miles distant from it in a line perpendicular

to the strike. The exposure was very
bad and I could find no trace of
serpentine. The rock however and
its associates are precisely similar
to that in the valley and it is
apparently the same bed exposed on
opposite sides of an anticlinal

I shall lose no opportunity of
examining the ancient limestones
and hope that I may yet succeed
in finding something more satis-
factory to send you.

Yours truly,

Owens A. Derby

