

Colorado Springs
Oct. 7-1913

D. G. F. Black
Chicago Ill.

Dear Doctor Black -

It has been a long time since I have written to you but now with the Fall here again we are picking up the threads of our work of investigation and are going to carry it on through the season.

Have you succeeded yet in getting Pickvill's book of which we were writing. It seems to be merely quoted now and the present Cosmos has quite an article from him on Enamel. I expect to write him soon perhaps.

I went over the whole work done so far before our State Society in June and the Committee was continued as usual. We still have some of the fund left, enough for this season's work.

I don't know that we shall need very much unless new developments arise, and unless we decide to investigate the suspected territory at Phoenix, Arizona of which you know. I don't think there is any question but that their conditions are similar to ours.

I may get a chance to go down there this

water.

2

The question comes up however of what to do when I get there. I have gone over the question carefully with Prof. Strickby, whom you talked with, regarding the water analysis and he says that those already obtained are useless so far as drawing conclusions is concerned; that they tell us nothing in that the figures from different afflicted areas are totally different.

That is the conclusion I had arrived at and he says there is no use in gathering any more of the "standard" analyses. He advises searching for "traces" of uncommon ingredients in these waters and that will be our object from now on.

I find that he has a suspicion regarding a possible constituent and that he intends to do some chemical work when he has time.

In looking over analyses of waters from California I noticed that Arsenic was given in certain of them and I mentioned this to Strickby.

It has occurred to me that some such element as that might be a cause and he said that he had exactly the same suspicion and was going to try and work it out.

The most recent work I have done is as follows

A case was reported to me in Denver of 3 persons adult children in a family who had lived for years in a ranch in the mountains about 60 miles from Denver.

The oldest boy was born elsewhere and went out to this ranch to live when about 7 years old. His incisors & second molars are mottled and stained; rest of denture normal.

The other two children were born and always lived in the ranch until they were fast 20. Never lived anywhere else and their teeth are all badly stained and mottled.

I went by train in the train about 2 weeks ago and got off at a little place in the mountains then walked about three miles back into the country to the ranch. I found the single source of water supply to be a fine spring coming out of the mountain side just back of the house. This spring has been running there to certain knowledge for more than 40 years and you never saw a more perfect clear tasteless water.

I had some empty bottles & brought back a gallon of this water for analysis and tramped back to the railroad with my precious burden. The bottles have stood two weeks now at home and no trace of sediment.

Now here is the ⁴most localized area yet discovered where this mysterious influence is at work and it seemed to me to be worth careful study. If it isn't the water what in the world can it be operating thru to produce so marked a result?

Strieby has agreed to examine some of this water for "traces" and the rest will be examined for traces by the Col. Fuel & Iron Co's chemist at the steel plant at Pueblo. If they can't find anything then we are "up stumps."

Strieby has suggested a certain experiment that I am going to try with one of the teeth and I will let you know the result. I am hoping something good from it.

I am going to confess that my mind is coming around more strongly to the possibility of its being an external influence of some kind.

Why is it that if it be wholly developmental the layers of enamel just adjacent to the dentin-enamel junction are not affected: in other words the innermost layers of the enamel cap?

Why is it that only the external or last formed enamel is the only part affected?

May it not be that some solvent has been at work and taken out the cementing substance

after it was laid in. We are positive now that
the brown discoloration appears long subsequent
to the eruption of the teeth.

What do you think of these points?

I enclose a letter, an answer to one written by
Dr. Kelly one of our men which will explain
itself and do you think it worth while for us
to try and get aid in this way. Would you feel
like recommending that aid be given us
if we decide to ask for it. Please think the
matter over and write me when you find a chance.

I hope you are feeling well and suggest that
as usual you are working hard.

With my kindest regards

Very Truly Yours

Fredrick S. McKay

700 Exchange Bank Bld.

Dear Father
It seems to me
that there is no better
purpose to which some
of the Research funds might
be put, WAB,