The sooner data can be collected concerning this, and experiments undertaken to collect results bearing upon it, the sooner will much land become of value which now seems to offer no inducements to settlers, and at certain seasons present a very uninviting appearance.

At Moosejaw I observed fields in which the crops appeared in good condition, while the surrounding prairie presented a parched look.

There is no doubt but cultivation will tend to preserve moisture in the soil, by preventing the sun's rays acting directly upon the surface, and thus rapidly carry off the moisture by evaporation.

Many travelers over this part of the Northwest during the past summer have been struck with the growth of grain growing by the track, where it had likely fallen during the construction of the road. We observed it frequently, and were convinced that fertility was in the soil if favorable conditions surrounded the plant as it developed.

THE ORIGIN OF ALKALI IN PRAIRIE PONDS.

The appearance of some of the alkali ponds in this district present a rather novel feature, especially those observed near Maple Creek. Here, as we approached in the evening, we saw the ponds lying to the north of the track presenting a most wierd-like appearance, surrounded by the rings of white "alkali," left as the waters evaporated. Bordering these were red rings, made up of a mass of "alkali" plants, largely of the species Salicornia herbacea. These peculiar plants exist and flourish in a soil impregnated with saline substances. In the struggle for existence they have survived where other forms of plant life have ceased to exist, and now hold a monopoly in the so-called "salty" districts. The presence of "alkali" in these comparatively dry areas is not a matter of surprise when we remember all soils contain a certain amount of soluble salts. In our Western districts these are carried into ponds which have no outlet. As evaporation goes on the waters become more and more saline, until they are so strongly impregnated that when the ponds dry up an alkaline incrustation is left. If the rain-fall was greater in these localities and the water carried off, as we find in other countries, the shallow ponds would no longer show incrustations from the accumulated salts held in solution. This alkali seems in most cases to be a mixture of calcium and magnesium sulphates, small quantities of calcium and magnesium carbonates and some sod[illegible] chlorides.

ORIGIN OF THE DEPRESSIONS AROUND LARGE BOULDERS ON THE PRAIRIE.

Another peculiarity observable in [illegible] district is, in many cases, the large st[illegible] occupy the centre of a considerable [illegible] pression. So common is this feature [illegible] one is led to seek a reason for it. S[illegible] have attributed this to the work [illegible] buffaloes tossing up the dirt around [illegible] stone and frequenting such places m[illegible] considerable hole has been formed. [illegible] think that in addition to this wind [illegible] rain have done much to enlarge the [illegible] pression.

One can readily understand that [illegible] wind sweeping over these immense t[illegible] less districts would drive away any l[illegible] earth around the stone. A small spac[illegible] thus left for the accumulation of w[illegible] running into the depression. This w[illegible] wear down more soil which on dry[illegible] would be again thrown out by the w[illegible] sweeping around the stone. Allow t[illegible] to continue for a lengthened period [illegible] a large depression would be formed; [illegible] fact large enough to form the nucleus [illegible] a pond, which, on evaporating and [illegible] loose dirt from the bottom swept up [illegible] sides so as to form banks, would be [illegible] creased in depth. Might not th[illegible] agencies explain the formation of many [illegible] these ponds with no outlet and which [illegible] many cases show one or more la[illegible] stones that may have been import[illegible] factors in the first steps to their for[illegible] tion as they were ploughed round [illegible] buffaloes in amusement or swept by str[illegible] winds which encircled them? Hav[illegible] made a few remarks upon some of t[illegible] most striking features observed as [illegible] crossed the country lying between here a[illegible] Calgary, I shall ask your attention to so[illegible] localities of more than ordinary pal[illegible] ontological interest. In placing the r[illegible] sults of my labors before you I shall co[illegible] sider the places in the order in wh[illegible] they were visited and endeavor to c[illegible] your minds with me to these localiti[illegible] which to me have been spots of inter[illegible] interest and much instruction.

CALGARY.

At Calgary I separated from our part[illegible] they pushed on to view the magnifice[illegible] scenery of the Rockies, I to investig[illegible] some of the outcrops bordering the B[illegible] River, near this place. We met n[illegible] again till my work was largely finish[illegible] and the trip at an end. On the morn[illegible] after our arrival in this town of ten[illegible] with hammer in hand I started we[illegible]