

MISCELLANEOUS.

Written for this Paper.

OUR NATIVE FORESTS.

It is said that the power of repentance is one of the psychical differences between man and the lower animals. Wide as this gulf may be, it may still be questioned if a wider gulf is not shown when men avoid those things which call for repentance.

The people of Utah are permitting a work to be done which will not only call for repentance, (a too cheap method of ridding one's self of the effects of sin) but will absolutely demand undoing, and this at the expense of considerable time, money and labor. I refer to the devastation of the limited forest area of our Territory. The mountains of Utah were never heavily timbered, and instead of allowing their scanty covering to be entirely removed, every effort should have been made in the past to preserve what there was and to use all available means to increase the forest area. Since this was not done in the past a halt should now be called, and the ruthless destruction which is still going on should not be permitted for another day. In more parts of Utah than one, men deliberately set fire to the mountain oves to burn down the trees, because that is easier than to use the ax, although by burning ten trees are consumed for every one which is left in such a condition that it is of future use. This and other wasteful methods of getting timber to use would be bad enough if its worst feature was simply the prodigal use of a scarce article, but as a matter of fact this is one of the least objections which can be urged against the present system.

The water supply is one of the most important questions which confront the people of Utah. With water our valleys may become gardens; without water they can only be deserts, and the relationship between the water supply and our mountain forests is a very intimate one. The distribution of the water throughout the year is even more important than the actual number of inches of rain fall. Thirty inches of rain each year, falling at opportune times, will enable the farmer, in most parts of the United States, to raise a fair crop. Twice that amount of rain falling during one or two storms would only result in useless and disastrous floods.

The farmers of Utah are almost wholly dependent on the melting snows for their supply of water, and whether the snow shall melt during the first few weeks of warm weather in the spring, causing disastrous floods or whether it shall slowly melt during all the summer, yielding water which shall enable the farmer to make the "desert blossom as the rose," depends very largely on whether or not our mountains shall be denuded of their trees.

If there are those who believe that these tears are idle and that there is at best a very remote relationship between the forest area of a country and its available rainfall, they have only to study the past and present condition of Spain and especially of Syria to convince themselves that the obliteration of forests is attended with the most direful results.

Seven hundred years before the time of Christ, Syria was a country of almost boundless fertility, and its mountains were clothed with forests of rare luxuriance. Between seven hundred and six hundred B. C. a combination of circumstances forced Egypt to become a commercial nation, and as she was practically a treeless country it seemed necessary for her to possess herself of some timbered country to furnish lumber for ships, and Syria was the country selected. After long and bloody wars Syria passed under Egyptian control and the destruction of her forests began. As nearly as the facts can be gleaned from history, the decrease of forest area and the decrease of fertility were simultaneous. Today many parts of Syria which once supported a large population are a hopeless desert, and other parts which once were irrigated by the mountain streams are now subject to the most devastating floods. All that has been said of Syria is true to a lesser degree of parts of Spain. Experience of this kind has not been wholly confined to the Old World, for I learn from good authority that Chili, in South America, is today doing her utmost to rectify her mistake of clearing her mountains of timber. Lands which were of great agricultural value when the mountains were timbered are now all but deserts, deeply furrowed by the mountain torrent with which the melting snows of springs now devastate them.

It must not be supposed that all of the evidence of the value of trees is of a negative character. In 1798 the French took temporary possession of Egypt and among other improvements suggested by them was that of timber culture. Napoleon caused some groves to be planted on the delta of the Nile river, and since then the timber area has been considerably increased, and as it has increased the rainfall has increased. In Egypt above the delta rain never falls, and on the delta previous to the planting of trees rain was almost, if not quite, unknown.

In our own country it is almost certain that rain increases in our western states as the timber area is increased. Reports from the Dakotas, Kansas and Nebraska seem to confirm this statement.

Since for every effect there is a cause, it seems highly proper to inquire why trees are thus beneficial in producing and regulating rainfall. No one reason will fully answer the question here suggested.

When the mountains are thickly covered with trees the snow remains somewhat evenly distributed over their surface. The shade cast by the trees causes the snow to melt slowly, and much of that which melts sinks into the ground to reappear as springs. As water passes through the ground slowly, that which would run off from the surface in a few days as a flood flows as a spring for months, and flows as a gentle stream. Without the shade afforded by trees all of the snow which does not slide, or is not blown into the canons is melted by the first warm weather in the spring and most of the water rushes into the valleys as a mountain torrent which frequently does harm but which never does any

good. Snow which is blown or which slides into deep and narrow canons is by no means lost, but it is of little or no use in forming springs. Its only use is in feeding streams which, when they reach the valleys, may be turned into irrigating ditches. If the canons are so wide that the rays of the sun can reach the bottom for any considerable length of time each day, the snow will probably be melted before the irrigating season is over. Of course trees protect the snow in the canons as well as on the sides of the canons. Forests not only aid as just indicated, in distributing the water supply throughout the year, but they directly influence the precipitation of moisture.

Careful observations made by aeronauts show that the air over a forest is a little cooler and contains more vapor of water than air over a bare plain. Hence the conditions are more favorable for the precipitation of rain over a forest when a current of moist air passes over it than when the same current passes over a desert.

Some scientists believe that trees induce an electrical condition in the atmosphere favorable to rainfall, but so little is positively known that I pass this over with bare mention. Another direct benefit derived from trees is that they favor the growth of underbrush on the mountain sides; this brush sends roots into the ground which tend to keep the soil loose and easily permeable to water, and it also keeps the leaves which fall from being blown away and thus a humus is formed which will support grass and other directly useful vegetation.

From the foregoing facts I believe that the only conclusion which can be drawn is that active measures should at once be taken to check all needless destruction of timber; that Utah shall, at what ever expense may be necessary, begin to restore the trees to the mountain sides, and encourage planting trees in all proper places. Every main irrigating ditch should be lined with trees. Probably not one thinking man will seriously disagree with the views herein expressed, but with us, as with the rest of the world, "what is everybody's business is nobody's business." If any effective work in this line is to be done a Forestry Association must be organized in Utah, and under the auspices of this association information of every kind relating to arboriculture must be collected and disseminated among the people.

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WAKEMAN'S WANDERINGS.

LONDON, Dec. 16, 1893.—The interiors of Norwegian peasant homes never present that warm, cheery, snug, restful and almost somnolent atmosphere of the Cumberland statesman's home, but it is still a place of simple comfort and plenty, and is often most characteristic and picturesque. If the ceilings be low, there is always plenty of room. I have come upon many a bonder's kitchen from twenty to thirty feet square, and houses in whose great living-rooms the whole family, and I mean by this the three or four families of each gaard or farm-house, with a goodly part of the neighborhood, could all be fed at a wedding or funeral supper, or engage in dancing, of which they are