

fatal results. No marked type of disease predominant. Last winter the river was the highest and the thermometer the lowest in eighteen years; the latter 4 deg. above zero. Also more snow than for many years previous. No swamps or mineral springs. Plenty of timber of fair quality.

JACKSON COUNTY, PHOENIX.

Dr. D. A. Covert. Phoenix is in the Rogue river valley. High mountain ranges to the north and south. The valley is well wooded. Has a number of mineral springs. Drainage good. The climate about the same as all of Southwestern Oregon—neither hot nor cold. As to rain, there is not too much nor too little. Snow seldom remains more than forty-eight hours. Diseases are generally of a bilious nature. General health, medium. Mortality of children, remarkably low.

SAM'S VALLEY.

By Dr. A. C. Stanley, situated in Rogue river valley; surrounded by mountains and heavy timber. The valley is barren of timber. Climate mild. Wet winters and dry summers. No winds or bad storms. One or two weak sulphur springs. Water soft. No lakes, but some swamps on the river bottoms. Seldom have more than three inches of snow. Range of thermometer seldom as low as 10 deg. below or 100 deg. above zero. No particular type of diseases prevail unless it be malarial fevers. Occasionally a case of typhoid fever. General health good. Rate of mortality very low.

LINN COUNTY, SHEDS.

By Dr. J. W. Starr. The location is healthy. Drainage not the best, as the country is level. No epidemics or endemics of any kind. Some indications of malaria of a mild type. No mineral springs, lakes or swamps. Water soft. Climate wet, windy and moderately cold. Slight snows.

MARION COUNTY, STAYTON.

By Dr. J. M. Kitchen. This section is free from swamps and lakes. Water soft. Moderate supply of timber. Drainage generally good. Last year the prevailing diseases were of the alimentary canal, especially among children, with a mortality of about five per cent. Rheumatism and scarletina has appeared. Last December enteric fever became endemic, but of ten cases in my practice only two proved fatal. Dis-

eases of the air passages are frequent but not of a serious nature.

TILLAMOOK COUNTY, NEHALEM.

By Mr. C. F. Knowles, postmaster. "We have about two hundred people here. The settlement is ten years old. We have three graves; two of still-born infants and one of a man who shot himself. If you find any healthier locality than this, please let me know." Mr. Knowles reports the county mountainous; heavily timbered; good drainage; abundance of soft spring water; usual wet and dry seasons; no strong winds. Some winters no snow at all. The lowest points of thermometer last winter were 6 deg., 18 deg., 22 deg., and 26 deg. Five years ago it sank to 10 deg. below zero. No prevailing diseases or endemics have occurred for many years.

UMATILLA COUNTY, WILLOWS.

By Mr. A. Wilson. No physician in that locality. The county is hilly with some even lands of from eight to ten miles wide. No timber within thirty miles; no mineral springs, lakes or swamps. Water generally hard. Little rain fall; the county dry and sandy; a great deal of wind. Snow fall last winter about one foot. Thermometer fell to 18 degrees below zero; sometimes rises to 110 degrees in the summer. There are but few settlers. Principal disease among children is diphtheria; cannot give the rate of mortality.

UNION COUNTY, INDIAN VALLEY.

Dr. M. B. Morris says he is living in a very healthy county. The county is hilly and barren, but good lands and grass near the mountains. Water soft and climate mild. Fed sheep only three days last winter.

WASCO COUNTY, PRINEVILLE.

Dr. L. Vanderpool reports a sandy country but with bottom lands of rich loam; some alkaline sections. The county is one vast plateau with numerous small beds of lava. The streams run or seem to have cut through lava beds. The few mountain peaks which seem to pierce the level sands, are all covered with fir, pine, and tamarack. The lava lands are covered with juniper, sage and bunch grass. Lands along the streams are very productive. Frosts every month in the year. Rains in summer but not in winter. Slight snow fall—only three inches last winter.

Water generally hard. Thermometer sank to 28 deg. below zero, but did not remain long. In summer it reaches 100 deg. the average for winter being 30 deg., and for summer 76 deg. The usual variety of diseases prevails, such as bilious, congestive, intermittent and puerperal fevers, diphtheria, etc. Mortality of children not more than one and one-third per cent. Children have good teeth owing to the hard water and absence of acid fruits.

THE GEOLOGY OF OREGON.

The geology of Oregon is unique and interesting, and the geologist will find no richer field for his researches than in Oregon. Cenozoic along the coast; Metamorphic in the range and region of Coast Mountains; Cenozoic again throughout the Willamette valley; Volcanic throughout the Cascade Mountains and along the Snake River country; while the rest is a varied combination of the above.

Formerly the Pacific extended far to the eastward, and lashed the borders of the Rocky Mountains, and nothing appeared to the westward save a few of the highest peaks of the Blue Mountains; perhaps none but the huge volcano which formerly occupied the spot where Grande Ronde valley is now situated. In course of time, however, the coast was elevated until the Cascades projected above the surface, then the waters between them and the Rocky Mountains formed a great lake with the Blue Mountains forming an island in the center, and thus it remained until the gorge was cut through the Cascades where the Columbia now runs, when the water was gradually drawn off and formed what is now called the Columbia Basin. Immense deposits of marine shells found on the several sides of the Blue Mountains, and deposits of the same age found on the top of the Cascades, prove the above theory to be correct.

Subsequently, when the coast was higher elevated, the Coast Mountains made their appearance and there was then formed another lake between them and the Cascades, and not until the rocky barrier at Oregon City was cut, was it deprived of its water.

The Coast Mountains gradually decrease in height as they approach the Columbia, and after they pass the British line they are no longer visible as mountains, but form a chain of islands extending as far as the territory of Alaska. The elevating force has been more active in the southern than in the northern part of the State; hence, the Coast Mountains, which, when the Cascades formed the coast, appeared as islands like that part of the chain that is still submerged north of Puget