ART. XVII.—*Sketch of the Distribution of Forest-trees in Nebraska Territory*; by JAMES T. ALLAN. (In a letter to Prof. GRAY.)

THE relative proportion of the several species and their general distribution in the tract of country lying west of the Missouri and between the parallels 40° and 43° is all that I will attempt to describe in this sketch.

And one remark will apply to all this country, that timber is found only upon streams or small groves about some spring on the wide prairie.

The valley of the Missouri is from three to six miles wide, and sometimes the stream winds down near the centre with both sides fringed with willows, behind which is a belt of cottonwood (*Populus monilifera*); these trees often 80 to 100 feet high: upon the bluffs which wall each side of this valley we find the different varieties of hard wood, also upon the hills, and ravines opening toward the river. On the tops of these hills we find *Quercus alba* and *rubra*, with occasional trees of *Quercus coccinea*; half way down the steep sides of these ravines we find *Tilia Americana* and *Ulmus fulva* in about equal quantities, with clumps of *Carpinus Americana*. Still lower down and in the rich soil at the bottom are *Gymnocladus Canadensis*, *Celtis occidentalis* and *Fraxinus Americana*, while on the cool northern slope half hanging down the hill are plenty of *Staphylea trifolia* and *Rubus occidentalis*. As we recede from the river toward the summit of the ridge we find scattering trees of *Carya alba* among the Oaks before mentioned, till we come to the prairie where the trees

terminate with a few "Scrub Oaks," 12 to 20 feet high, standing beyond the fringe of *Corylus Americana*. Among the latter in the spring we discover the bright blossoms of the Red bud (*Cercis Canadensis*) and in autumn the bright seed-pods of the *Ehonymus*.

Going west from the Missouri we find no trees except on the small streams on which, at intervals of ten miles or more are groves of White oak, Bur oak, *Carya glabra* and sometimes White elm; these groves will average in extent from 100 to 500 acres, and the above mentioned, with *Juglans nigra*, make up their prominent trees.

The valley of the Platte, to which so much attention is now directed as the great central route, demands a notice. At the mouth we find a heavy body of timber, chiefly Cottonwood, with a small proportion of *Acer rubrum* and *Morus rubra*. As we proceed up 20 miles the dull green of *Juniperus Virginiana* begins to be seen, which farther up we see covering some of the small islands, with trees often 18 inches and more in diameter. This has furnished for a hundred miles or more telegraph poles of a superior quality.

Upon the tributaries of the Platte, particularly on the north side *Quercus macrocarpa* is the most abundant of large trees.

After leaving Fort Kearney, the immigrant finds but a fringe of cottonwoods skirting the stream, and on the road to the new gold mines for 200 miles not a tree for shade or wood: the well known "Buffalo chips" must supply the latter. Upon the North Platte the emigrant to California or to the Mormon "Zion" is always in sight of the trees bordering on the stream, though often too far off to obtain fuel. 400 miles beyond Ft. Kearney is found in several places large groves of *Negundo aceroides* on the banks of the creeks.

After passing Fort Laramie the pleasant sight of green pines, though at a distance, relieves the eye and tells of the cool waters in the south pass, so refreshing in the heat of summer.

The very rapid growth of trees in this rich soil is a noticeable feature. The hazel which fringes the timber on the prairie side is interspersed with abundance of saplings *Carya alba* and *glabra* and *Alnus fulva*, which shoot up with wonderful rapidity, while upon the sand bars of the river, as soon as the waters subside in July, there spring myriads of young cottonwoods and willows. Of the latter I have neglected to speak though they cover no inconsiderable portion of the valleys of the Missouri and Platte. Everywhere fringing the streams, and where there is a tract annually overflowed by the spring rise there we find a dense growth often 20 to 30 feet high and from one to three inches in diameter growing so thickly that it is impossible without great difficulty to force a passage through them.

The relative proportion of the several species may perhaps be set down as follows :

1. *Populus monilifera*.
2. *Quercus macrocarpa*.
3. *Quercus alba* and *Quercus rubra*.
4. *Tilia Americana*, *Ulmus fulva* and *Quercus discolor*.
5. *Juglans nigra*, *Ulmus Americana*.
6. *Carya alba*, *Carya glabra*.
7. *Fraxinus Americana*, *Celtis occidentalis*.
8. *Juniperus Virginiana*, *Platanus occidentalis*.
9. *Acer rubrum*, *Gymnocladus Canadensis*.

Besides the above mentioned, of the smaller varieties there are *Prunus Americana*, *Zanthoxylum Americanum*, *Staphylea trifolia*, *Negundo aceroides*, *Corylus Americana*, *Carpinus Americana*, *Alnus incana*, *Euonymus Americana*, *Cercis Canadensis*, *Cornus sericea* ?

In the Omaha land district, which contains something like 4000 square miles of land, there appears from the plots in the office to be about 75,000 acres of timber. A tract of country of equal size lying west of it would contain much less.

The botanical names above correspond to and have been compared with the descriptions in Gray's "Manual."

Omaha, Nebraska, April 2, 1861.