9-1-1887

A Meeting-Place for Two Floras

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Bulletin of the Torrey Botanical Club, Vol. 14, No. 9 (Sep., 1887), pp. 189-191

A Meeting-place for two Floras.*

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About half-way across the northern part of Nebraska, a few miles east of the 100th meridian, there is a very interesting botanical locality. A small stream starts at a point about twenty or twenty-five miles south of the Niobrara River, and runs northward through a deep and winding cañon to the river mentioned. The surrounding country is absolutely treeless, and the surface is in many places thrown up into rounded hills of what must have once been drifting sand. The cañon sides are very abrupt, and they descend in many places fully two hundred feet before the bottom is reached. The stream is known to the whites as Long Pine Creek, but to the Indians it was the Wasahancha, which signifies " where the pines extend far out." Both names refer to the pines which have here a station so far removed from the mountains as to have attracted the attention of the Indians, as well as the early white settlers.

In this cañon, as I found in a recent visit, there is a blending of the Eastern and the Western floras in a most unusual way. The first thing that strikes the visitor is the fact that here are growing great numbers of Rocky Mountain pines (*Pinus ponderosa*, var. *scopulorum*). They are so abundant, and of such size that they are largely used in the neighborhood for lumber and for fuel. Subsequent examination of the country around shows that these pines are found along the streams or on the hills all the way up to the mountains of Wyoming, and they appear also to be connected with the heavy body of pine in the Black Hills in Dakota. There are none, however, eastward of this cañon, although the sides of the broad cañon of the Niobrara river, near the mouth of the creek, are dotted with scrubby pines. The Indian name of the creek—the Wasahancha—is therefore most appropriate: " where the pines extend far out."

* Read before the Botanical Club, A. A. A. S., at the N. Y. Meeting, August, 1887.

By referring to Professor Sargent's volume upon the "Forestry of the United States," in the reports of the Tenth Census, we find that the pine in question ranges from the far West into the Rocky Mountain region, and that its easternmost station is given as the Black Hills of Dakota. We must now add northern and northwestern Nebraska to the region covered by it, with Long Pine Creek (Wasahancha) as its eastern limit.

Much as I was surprised at the presence of the Rocky Mountain Pine in this locality, I was much more so at finding large trees of Black Walnut (*Juglans nigra*) growing in the cañon by the side of the pines. The walnut is still very common, and was formerly so abundant that a good many thousand feet of walnut lumber were manufactured from the logs. The western range of the Black Walnut is given by Sargent as "through southern Michigan to southern Minnesota, eastern Nebraska, and eastern Kansas." I doubt whether there is any other place on the continent where the Black Walnut and the Rocky Mountain Pine grow normally side by side. I could not trace the walnut further west, and have little doubt that this is its westernmost station, or very nearly so. It does not occur at Valentine, near Fort Niobrara, fifty miles to the westward.

The Ironwood (*Ostrya Virginica*) was another surprise to me. At Long Pine it is very abundant, and so I found it at Valentine, and when a few days later I clambered through the cañons in the vicinity of Rapid City in the eastern Black Hills of Dakota, I still found it, although Sargent gives its entire limit as "through eastern Iowa, southeastern Missouri, and Arkansas to eastern Kansas, the Indian Territory, and eastern Texas." Coulter does not include it in the "Rocky Mountain Botany."

The only oak in northwestern Nebraska appears to be the Bur-Oak (*Quercus macrocarpa*), and instead of being the normal form, it approaches the little Mountain Oak (*Q. undulata*). The trees at the eastern stations (Long Pine and Valentine) are frequently large, 30 to 50 feet high, but as we go west—Chadron, Fort Robinson and the Black Hills—they are smaller; in all cases, however, the cup is but little fringed, showing in this a strong tendency to the mountain species (*Q. undulata*).

The Choke Cherries, from Long Pine westward, are mostly

of the mountain species (*Prunus demissa*), and are large and edible. Whenever I could do so, I always collected a handful of them, for eating, as I pursued my search for plants. At one house where I stopped for dinner, I was treated to choke cherry pie, which was very palatable indeed! The species at Long Pine is identical in every respect with that found in abundance in the Black Hills, and at Fort Robinson near the line between Nebraska and Wyoming.

The Golden Currant (*Ribes aureum*) is another mountain species which extends eastward to Long Pine. I found it fruiting profusely. Likewise, the pretty little shrub, *Rhus aromatica*, var. *trilobata*, is another westerner which I noted in full fruit in this famous cañon.

There are many other plants which show that here the two floras meet and overlap, but these given are probably the most striking.