

creek, a clear and handsome stream, running through a broad valley. In its course through the bottom it has a uniform breadth of twenty-two feet, and six inches in depth. A few willows on the banks strike pleasantly on the eye, by their greenness, in the midst of the hot and barren sands.

The *amorpha* was frequent among the ravines, but the sunflower (*helianthus*) was the characteristic; and flowers of deep warm colors seem most to love the sandy soil. The impression of the country travelled over to-day was one of dry and barren sands. We turned in towards the river at noon, and gave our horses two hours for food and rest. I had no other thermometer than the one attached to the barometer, which stood at 89°, the height of the column in the barometer being 26.235 at meridian. The sky was clear, with a high wind from the south. At 2, we continued our journey; the wind had moderated, and it became almost unendurably hot, and our animals suffered severely. In the course of the afternoon, the wind rose suddenly, and blew hard from the southwest, with thunder and lightning, and squalls of rain; these were blown against us with violence by the wind; and, halting, we turned our backs to the storm until it blew over. Antelope were tolerably frequent, with a large grey hare; but the former were shy, and the latter hardly worth the delay of stopping to shoot them; so, as the evening drew near, we again had recourse to an old bull, and encamped at sunset on an island in the Platte.

We ate our meat with a good relish this evening, for we were all in fine health, and had ridden nearly all of a long summer's day, with a burning sun reflected from the sands. My companions slept rolled up in their blankets, and the Indians lay in the grass near the fire; but my sleeping place generally had an air of more pretension. Our rifles were tied together near the muzzle, the butts resting on the ground, and a knife laid on the rope, to cut away in case of an alarm. Over this, which made a kind of frame, was thrown a large India rubber cloth, which we used to cover our packs. This made a tent sufficiently large to receive about half of my bed, and was a place of shelter for my instruments; and as I was careful always to put this part against the wind, I could lie here with a sensation of satisfied enjoyment, and hear the wind blow, and the rain patter close to my head, and know that I should be at least half dry. Certainly I never slept more soundly. The barometer at sunset was 26.010, thermometer 81°, and cloudy: but a gale from the west sprang up with the setting sun, and in a few minutes swept away every cloud from the sky. The evening was very fine,

and I remained up to take some astronomical observations, which made our position in latitude 40° 51' 17", and longitude 103° 07' 00".

July 7.—At our camp this morning, at 6 o'clock, the barometer was at 26 183, thermometer 69°, and clear, with a light wind from the southwest. The past night had been squally, with high winds, and occasionally a few drops of rain. Our cooking did not occupy much time, and we left camp early. Nothing of interest occurred during the morning. The same dreary barrenness, except that a hard marly clay had replaced the sandy soil. Buffalo absolutely covered the plain on both sides the river, and whenever we ascended the hills, scattered herds gave life to the view in every direction. A small drove of wild horses made their appearance on the low river bottoms, a mile or two to the left, and I sent off one of the Indians (who seemed very eager to catch one) on my led horse, a spirited and fleet animal. The savage manœuvred a little to get the wind of the horses, in which he succeeded—approaching within a hundred yards without being discovered. The chase for a few minutes was interesting. My hunter easily overtook and passed the hindmost of the wild drove, which the Indian did not attempt to *lasso*; all his efforts being directed to the capture of the leader. But the strength of the horse, weakened by the insufficient nourishment of grass, failed in a race, and all the drove escaped. We halted at noon on the bank of the river, the barometer at that time being 26.192, and the thermometer 103°, with a light air from the south, and clear weather.

In the course of the afternoon, dust rising among the hills at a particular place, attracted our attention; and, riding up, we found a band of eighteen or twenty buffalo bulls engaged in a desperate fight. Though butting and goring were bestowed liberally, and without distinction, yet their efforts were evidently directed against one—a huge gaunt old bull, very lean, while his adversaries were all fat and in good order. He appeared very weak, and had already received some wounds, and, while we were looking on, was several times knocked down and badly hurt, and a very few moments would have put an end to him. Of course, we took the side of the weaker party, and attacked the herd; but they were so blind with rage, that they fought on, utterly regardless of our presence, although on foot and on horseback we were firing in open view within twenty yards of them. But this did not last long. In a very few seconds, we created a commotion among them. One or two, which were knocked over by the balls, jumped up and ran off into the hills; and they began to retreat slowly