Ninthly. Since the geological period now passing commenced, called the *alluvial*, or pleistocene period, certain changes have been going on, which indicate a very great antiquity to the drift period, which was the commencement of the alluvial period, and has been considered among the most recent of geological events. I refer to the formation of deltas and of terraces.

Of the deltas I will mention but a single example, to which, however, many others correspond. The Mississippi carries down to its mouth 28,188,803,892 cubic feet of sediment yearly, which it deposits; or one cubic mile in five years and eighty-one days. Now, as the whole delta contains twenty-seven hundred and twenty cubic miles, it must have required fourteen thousand two hundred and four years to form it in this manner.

Terraces occur along some of the rivers of our country from four hundred to five hundred feet above their present beds, and around our lakes to the height of nearly one thousand feet. They are composed of gravel, sand, clay, and loam, that have been comminuted, and sorted, and deposited, by water chiefly. At a height two or three times greater, on the same rivers and lakes, we find what seem to be ancient sea beaches, of the same materials, deposited earlier, and less comminuted. The same facts also occur in Europe, and probably in Asia.

Now, it seems quite certain, that these beaches and terraces were formed as the continents were being drained of the waters of the ocean, and the rivers were cutting down their beds; which last process has been going on in many places to the present day. Yet scarcely no where, since the memory of man, have even the lowest of these terraces and beaches been formed, save on a very limited scale, and of a few feet in height. The lowest of them have been the sites of towns and cities, ever since the settlement of our country, and on the eastern continent much longer. Yet we see the processes by which they have been formed now in operation; but they have scarcely made any progress during the period of human history. How vast the period, then, since the work was first commenced! Yet even its commencement seems to have been no farther back than the drift epoch, since that deposit lies beneath the terraces. But the drift period was comparatively a very recent one on the geological scale. How do such facts impress us with the vast