vertebrate life of the Silurian period, or even the ichthyic life of the earlier Old Red Sandstone period, must have been comparatively inconspicuous from any sub-aerial point of view elevated but a few hundred feet over the sea-level. Even the few islets of the latter ages of the period, with their ferns, lepidodendra, and coniferous trees, forming, as they did, an exceptional feature in these ages of vast oceans, and of organisms all but exclusively marine, may have well been excluded from a representative diorama that exhibited optically the grand characteristics of the time. Further, it seems equally probable that the introduction of organized existence on our planet was preceded by a change in the atmospheric conditions which had obtained during the previous period, in which the earth had been a desert and empty void. We know that just before the close of the Silurian ages terrestrial plants had appeared, and that before the close of the Old Red Sandstone ages, air-breathing animals had been produced; and infer that the atmosphere in which both could have existed must have been considerably different from that which lay dark and heavy over the bare hot rocks, and tenantless, steam-emitting seas, of the previous time. Under a gray opaque sky, in which neither sun nor moon appear, we are not unfrequently presented with a varied drapery of clouds,—a drapery varied in form, though not in colour: bank often seems piled over bank, shaded beneath and lighter above; or the whole breaks into dappled cloudlets, which bear—to borrow from the poetic description of Bloomfield—the "beauteous semblance of a flock at rest." And if such aerial draperies appeared in this early period, with the clear space between them and the earth which we so often see in gray, sunless days, the optical aspect must have been widely different from that of the previous time, in which a dense vaporous fog lay heavy upon rock and sea, and extended from the earth's surface to the upper heights of the atmosphere.