

green in their season, scarce support the existence of a single creature, and remain untouched in stem and leaf, from their first appearance in spring, until they droop and wither under the frosts of early winter. Even the insects that infest the herbaria of the botanist almost never injure his ferns. Nor are our resin-producing conifers, though they nourish a few beetles, favourites with the herbivorous tribes in a much greater degree. Judging from all we yet know, the earliest terrestrial flora may have covered the dry land with its mantle of cheerful green, and served its general purposes, chemical and others, in the well-balanced economy of nature ; but the herb-eating animals would have fared but ill even where it throve most luxuriantly ; and it seems to harmonize with the fact of its non-edible character, that up to the present time we know not that a single herbivorous animal lived among its shades. From all that appears, it may be inferred that it had not to serve the purposes of the floras of the passing time, in which, according to the poet,

“ The world's bread depends on the shooting of a seed.”

The flora of the Coal Measures was the richest and most luxuriant, in at least individual productions, with which the fossil botanist has formed any acquaintance. Never before or since did our planet bear so rank a vegetation as that of which the numerous coal seams and inflammable shales of the carboniferous period form but a portion of the remains, —the portion spared, in the first instance, by dissipation and decay, and in the second by the denuding agencies. Almost all our coal,—the stored up fuel of a world,—forms but a comparatively small part of the produce of this wonderful flora. Amid much that was so strange and antique of type in its productions as to set the analogies of the botanist at fault, there occurred one solitary order, not a few of whose species closely resembled their cogeners of the present time. I refer, of course, to its ferns. And these seem to have