

its screw-like clusters of narrow leaves, and, high over all, tall palms, with their huge pinnate fronds, and their curiously aggregated groupes of massive fruit. And yet the more meagre vegetation of the earlier time is not without its special interest. The land-plants of the Old Red Sandstone seem to compose, all over the world, the most ancient of the terrestrial floras. It was held only a few years ago that the Silurians of the United States had their plants allied to the *Lepidodendron*. But the group in which these occur has since been transferred from the Upper Silurian to the Old Red System; and we find it expressly stated by Professor H. D. Rogers, in his valuable contribution to the "Physical Atlas" (second edition, 1856), that "the Cadent [or Lower Old Red] strata are the oldest American formations in which remains of a true terrestrial vegetation have yet been discovered." It has been shown, too, by Sir Roderick Murchison, that the supposed Silurian plants of Oporto are in reality Carboniferous, and owe their apparent position to a reverse folding of the strata. I have already referred to the solitary spore-cases of the Ludlow Rocks; and beneath these rocks, says Sir Roderick (1854), "no remains of plants have been discovered which are recognisably of terrestrial origin." Scanty, too, as the terrestrial flora of the Old Red Sandstone everywhere is, we find it exhibiting very definitely the leading Palæozoic features. Its prevailing plants are the ferns and their apparent allies. It has in our own country, as has been just shown, its ferns, its lepidodendra, its striated plants allied to the calamites, and its decided araucanite; in America, in the Cadent series, it had its "plants allied to ferns and lepidodendra;" and in the Devonian basin of Sabero in Spain, its characteristic organisms are, a lepidodendron (*L. Chemungensis*), and a very peculiar fern (*Sphenopteris laxus*).\*

\* "Though the coal of Sabero is *apparently* included in Devonian rocks," says Sir Roderick Murchison, "M. Casiano de Prado thinks that this ap-