

has proved the existence of several species of coniferous trees in the coal strata of Scotland; and similar examples have since been discovered in other carboniferous deposits. It is not a little curious that all the species are related to the *auracaria*, or Norfolk Island pine, and not to the common coniferæ; this is proved by the ducts of the vessels being arranged alternately, and in double and triple rows (see page 625). The pines of the coal have but few and slight appearances of the lines by which the annual layers are separated, and resemble in this respect the existing species of tropical regions; we may therefore infer that the seasons of the countries where the coal-plants flourished were subject to as little diversity, and that the changes of temperature were not abrupt.\* It is said that in the coal of Nova Scotia and New Holland, coniferæ with the ordinary structure occur.

41. REVIEW OF THE CARBONIFEROUS FLORA.—A more extended notice of the fossil plants of the carboniferous system is not within the scope of these lectures, and I will now offer a brief review of the principal facts that have been submitted to our notice. We have seen that the striking character of the flora of that incalculably remote epoch, is the immense numerical ascendance of the vascular, or higher tribes of cryptogamic plants, which amount to two-thirds of the whole of the species hitherto determined. With these are

\* Witham.