closely related to the Selaginella of the present day, have been the direct progenitors of the Phanerogamia.

On account of its anatomical structure and its embryological development, the sub-kingdom of the Phanerogamia has for a long time been divided into two large branches, into the *Gymnosperms*, or plants with naked seeds, and the *Angiosperms*, or plants with enclosed seeds. The latter are in every respect more perfect and more highly organized than the former, and developed out of them only at a late date during the secondary period. The Gymnosperms, both anatomically and embryologically, form the transition group from Ferns to Angiosperms.

The lower, more imperfect, and the older of the two main classes of flowering plants, that of the *Archispermeæ*, or *Gymnosperms* (with naked seeds), attained its most varied development and widest distribution during the mesolithic or secondary epoch. It was no less characteristic of this period, than was the fern group of the preceding primary, and the Angiosperms of the succeeding tertiary, epoch. Hence we might call the secondary epoch that of Gymnosperms, or after its most important representatives, the era of Pine Forests. The Gymnosperms are divided into three classes: the Coniferæ, Cycadeæ, and Gnetaceæ. We find fossil remains of the pines, or Conifers, and of the Cycads, even in coal, and must infer from this that the transition from scaled ferns to Gymnosperms took place during the Coal, or possibly even in the Devonian period. However, the Gymnosperms play but a very subordinate part during the whole of the primary epoch, and do not predominate over Ferns until the beginning of the secondary epoch.

Of the two classes of Gymnosperms just mentioned, that