

leopoldina, and many more; *Pseudosigillaria striata*, *rimosa*, *monostigma*; *Stigmaria ficoides*, *minor*). *Lepidodendroids* are large and frequent (*Lepidodendron aculeatum*, *obovatum*, *caudatum*, *rimosum*, *Sternbergii*, *elegans*; *Lepidophloios laricinus*; *Ulodendron majus*, *minus*; *Halonia tuberculata*, *tortuosa*, *regularis*; *Lepidophyllum majus*; *Lepidostrobus variabilis*). The ferns are abundant and varied; the *Sphenopterids* include many species, of which *Sphenopteris Hoeninghausii* and *tenella* are common (also *S. Bronni*, *Schlotheimii*, *tenuifolia*, *rigida*, *furcata*, *elegans*); *Alethopteris* is very plentiful (*A. lonchitica*, *Serlii*, *Mantelli*, *heterophylla*); also *Lonchopteris Bricii* and *L. Rohlii*; *Prepecopteris*, *Pecopteris*, *Megaphyton*, *Neuropteris* (*N. flexuosa*, *Loshii*, *tenuifolia*, *gigantea*), *Cyclopteris*, *Aulacopteris*. The *calamites* are widely diffused and abundant, especially *Calamites dubius*, *undulatus*, *ramosus*, *decoratus*, *Steinhaueri*; *Asterophyllites subhippuroides*, *grandis*, *longifolius*; *Volkmania binneyana*; *Sphenophyllum* seems here to reach its maximum, characteristic species being *S. emarginatum*, *saxifragæfolium*, *erosum*, *dentatum*, *truncatum*, *Schlotheimii*. Some coals and shales abound with *Cardiocarpus*, also *Trigonocarpus*, and *Noggerathia*.

Middle Coal Flora—(Lower Zone, Flore houillère sous-moyenne). — *Lepidodendroids* are characteristically abundant and varied (*Lepidodendron aculeatum*, *obovatum*, *crenatum*, *Haidingeri*, *undulatum*, *longifolium*; and *Lepidophloios laricinus*, *intermedius*, *crassicaulis*; *Ulodendron*, abundant in England, *U. dichotomum*, *punctatum*, *majus*, *minus*, etc.; *Halonia tortuosa*, *regularis*, etc.). *Sigillarioids* are numerous (*Sigillaria oculata*, *elegans*, *scutellata*, *elongata*, *mamillaris*, *alveolaris*, *reniformis*; *Stigmaria ficoides*, *minor*, *stellata*, *reticulata*; *Dictyoxylon*, *Lyginodendron*). *Calamites* abound (*Calamites cannæformis*, *Suckowii*, *Cistii*, *decoratus*, *approximatus*; *Asterophyllites subhippuroides*, *longifolius*; *Volkmania polystachya*). Ferns likewise form a notable part of the flora, especially *sphenopterids* (*Sphenopteris latifolia*, *acutifolia*, *elegans*, *dissecta*, *furcata*, *Gravenhorstii*, *nervosa*, *muricata*, *obtusiloba*, *trifoliata*); also *Prepecopteris silesiaca*, *oxyphylla*, *Glockeri*, *dentata*; *Megaphyton majus*; *Pecopteris ophioidermatica* and other similar forms. The *neuropterids* become abundant (*Neuropteris heterophylla*, *Loshii*, *gigantea*, *tenuifolia*; *Cyclopteris obliqua*; *Alethopteris lonchitica*, etc.). The abundant *Cordaites* of the higher measures are absent, though the fruit *Carpolithes* occasionally occurs.