several cones belonging to different species, if not genera. One of these is decidedly a species of Abies, or fir:* it was associated with fragments of trunks and branches, whose internal structure proved their relation to the fruit. Plate V. fig. 2, are microscopic views of transverse and longitudinal sections of this wood; 2^{a}. shows the cellular tissue in a transverse slice, seen by reflected light; 2^{b}. a vertical section in the direction of the medullary rays, exhibiting the vessels studded with single rows of glands. This wood occurs both in a calcareous and siliceous state; in some examples the external zones are calcareous, and the inner siliceous; in others the entire branch is changed into black flint, in which the coniferous structure is beautifully preserved.

Near Willingdon, in Sussex (*Geol. S. E.* p. 172.), a bed of sand, immediately beneath the galt, contains a layer of water-worn fragments of stems and branches, generally of small size; they are very commonly perforated by some kind of gastrochæna, and the cavities formed by these depredators are filled with particles of green chlorite sand. The structure of this wood is represented Plate V. fig. 3^{a}. a transverse, and 3^{b}. a vertical section, viewed by reflected light. In 3^{b}. the vessels are seen dotted with two parallel longitudinal rows of very minute

* It is figured and described as *Abies Benstedi*, by the author. Geol. Proc. January, 1843.