replaced by those belts of gneiss which accompany the quartz ridge of the Pfahl, and belong to the red variety or Bojian gneiss. The grey gneiss strata of the Danube might therefore be supposed to be older than this red gneiss, which from its relations in the district to the N.W., between Cham and Weiden, I had regarded as itself the more ancient formation. But the lithological characters of the grey Danubian gneiss are opposed to this view, since this rock not only presents a general resemblance to the gneiss formation of Bodenmais, which without doubt is directly overlaid by the mica-schist of the mountains of Ossa, thus shewing it to be the newer gneiss; but exhibits a repetition of the minor features which characterize the gneiss district of Bodenmais. We find in the Danubian gneiss that same abundant dissemination of dichroite, which gives rise to the typical dichroite-gneiss of Bodenmais, with nearly the same mineral associations in both cases. On the Danube, also, interstratified beds of hornblende-rock (at Hals near Passau), of serpentine (at Steinhag), and of pyrites (at Kelberg, and many points along the Danube), occur, as in the north. On the other hand, the graphite which abounds in the gneiss of Passau is not wanting at Bodenmais or Tischenreuth. The interstratified syenites and syenitic granites are, in like manner, common to all these districts; those near Passau being, however, richer in easily decomposed minerals, such as porcelain-spar (scapolite) and calcspar, are more subject to decomposition, and form the parent rock of the famous porcelain clays of the region.

These resemblances lead me to refer the Danubian gneiss, notwithstanding its apparent stratigraphical inferiority to the red gneiss, to the newer or Hercynian formation; and to explain its apparently abnormal relations by assuming a fault running along the strike from N.W. to S.E., through which the older gneiss of the Pfhal is brought up, and seems to overlie the younger.

We shall then regard the whole of the gneissic strata characterized by dichroite, which extend on the Danube from Passau to Linz, as equivalent to the Hercynian gneiss of Bodenmais, and designate it as the Danubian gneiss. We may here call attention to the abundance of graphitic beds in it, as also to the occurrence of porcelain clay, and of beds of iron pyrites and magnetic pyrites. If it is true (as maintained by Dr. Sterry Hunt) that all graphite owes its origin to organic matters, we must suppose the existence of a primordial region peculiarly rich in organic life; since graphite occurs here in almost all the strata, and in some places in