We have already discussed (Aug 09) how, during the last 150 years, our gardens, which were once dominated by native plants, have become enriched with species originating from many other parts of the 'temporate' world. As a reflection of this, our old churchyard has a fine collection of yews, while the new churchyard has giant sequoias from California.

Around them the gravestones tell a similar story. Once they were almost all of Grinshill stone, from nearby in Shropshire, but later, as transport systems improved, material was brought from elsewhere in Britain for those who could afford it. Now stone is sourced from ever further distances, being chosen both for quality and competitive prices. Cemeteries including our local churchyards are becoming 'Geological Museums', where cut and polished specimens reveal their nature more clearly than in many original quarries. (What all this has been adding to our adverse 'balance of payments' is another matter!)

Even in Bicton they illustrate the three main types of rock recognised by geologists:-

1. Igneous: Rocks formed originally in a molten state, (i.e. fire-formed) which cooled to a mass of crystals of the principle rock-forming minerals: glass-like quartz, milky white or pink 'feldspars' made of complex aluminium and sodium silicates and also darker 'ferro-magnesium' minerals. Variations in the proportions of these and sizes of crystals can produce granite in '57 varieties'.

2. Sedimentary: Rocks are made up of fragments of other rocks ranging from coarse gravels to finer sands and clays laid down in water or blown about by the wind. The Cardeston Stone or 'Alberbury Breccia' and the sandstones from Shelrock and Grinshill, used in the church, illustrate this range. Both are products of a desert environment from when the Shropshire 'basin' lay nearer the equator 250 million years ago. Such sediments are termed 'clastic' to distinguish them from those formed by chemical and organic activity such as limestones. Algae, corals and molluscs can extract dissolved calcium from seawaterand build limestones from their remains. The bigger fragments in the Cardeston Stone are, in fact, eroded limestone.

3. Metamorphic: Rocks started out as any one of thiese but have been altered to varied degrees by heat and pressure, while buried deep within the crust. They are now only accessible thanks to millions of years of erosion and are therefore often well over 600 million years in age.

When the new churchyard was opened in the 1880s many memorials continued the use of local sandstones, either as simple slabs (e.g. William Lewis, 1907) or the more ornate structure for the Wingfield family of Onslow. They, incidentally, illustrate the relative social levels of the local squire and the local builder. The Wingfield tombstone also illustrates the relative durability of the 'red' and 'white' sandstones. Both are used for decorative effect but the 'red' version in which sand grains are mainly held together with iron oxide, weathering is destroying the inscriptions. The welsh slate columns, 'metamorphic shale', are so far holding firm at each corner.

Around these the rest of the graveyard was soon becoming dominated by far-travelled material starting with cornish granite, (Rev. Newton Lloyd, 1888 and James Whitshorne, 1885). Pink scottish granite came later (Morgan of Udlington, 1938), otherwise, white italian marble, a metamorphic limestone, proved most popular for all ranks in the community. Simply cut, it could display dark inscriptions very well, but also as Romans and Michelangelo long ago demonstrated, this material was ideal for sculpture, which could now reflect victorian sentiment, as in the memorial to Jane Tisdale, 1890. Lichens also enjoy colonising marble surfaces so that there may be more around than 'meets the eye'.

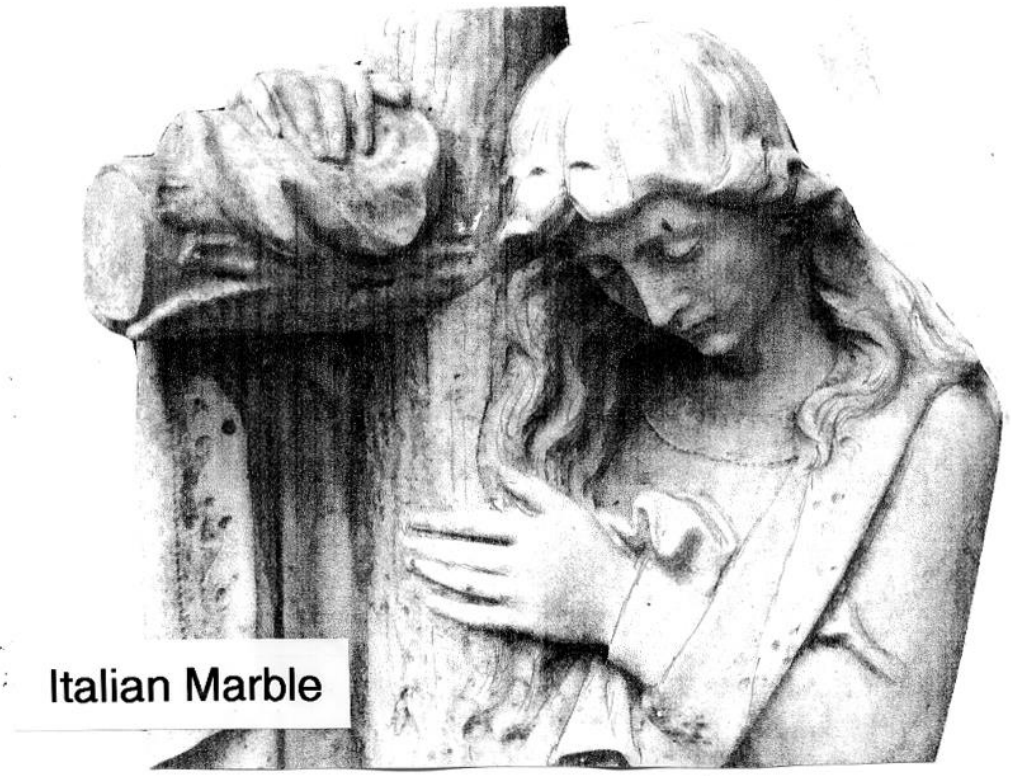
Almost lost amongst these stand two typical war graves, one from each war, using Portland Stone from Dorset. This material may have been chosen by the War Graves Commission for its essentially English associations, having been used for important national buildings from Wren's St. Pauls onwards and therefore appropriate for British cemeteries all over Western Europe.

Although classed as a limestone, the mason can treat it as a sandstone made up of ground up seashells instead of quartz. Just think of those gleaming white sandy beaches illustrated in travel brochures for tropical island holidays! 150 million years ago our continent was still in those latitudes, but has since drifted north.

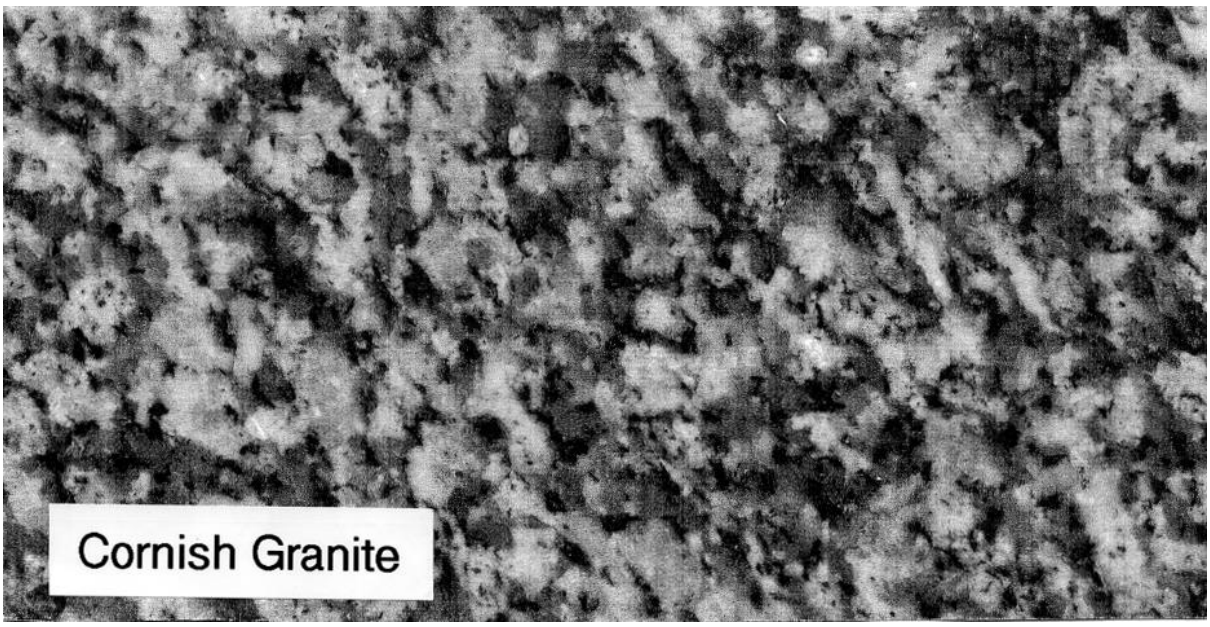
As burials apread into the newer section beyond the sequoias, yet more varied igneous and metamorphic rocks have been used. White marble remained useful for clear inscription but was now joined by contrasting dark igneous rocks for similar reasons (e.g. David Watson, 2006).

However, distinctive patterns still have an appeal and have been recently provided by two other rocks. One is a version of 'Larvikite', originally from Larvik on the Sogne Fjord in Norway, but now sourced from China. Within a dark crystal background, large flat feldspar crystals act like mirrors each reflecting light in one direction. As you walk past Bill Wall, 2008 for instance, it appears to wink at you. Another pattern is provided by Gneiss (pronounced 'nice'), which is a metamorphic granite (Reg Trow, 2000 and Yvonne Longland, 2005). The way in which the original crystal network appears to have been remelted and sheared into the pattern of contorted streaky bacon demonstrates the immense pressures involved. The result is as good as any modern art!

Amongst all this one can still find some dark slate which may have come from nearby Wales (Scharf, 1985). There is still plenty available!



Italian Marble



Cornish Granite