Slate is regarded as one of the most metalliferous rocks: nearly all the principal metallic ores have been found in slate, either in veins or beds; but it is remarkable that flinty slate seldom contains any repositories of metallic matter. Lead and copper are the principal metals found in the slate rocks of England and Wales: they are not so rich in lead as the mountain limestone, but the lead ore in slate rocks contains a larger portion of silver. The killas of Cornwall, so remarkably metalliferous, is a variety of slate.

Greywacke and Greywacke-Slate; German Grauwacké.—This dissonant term, which we have borrowed from the German, the French geologists have exchanged for a name not more harmonious, though more expressive, Traumate, from the Greek Thrausma, a fragment.

Greywacke, in its most common form, may be described as a coarse slate containing particles or fragments of other rocks or minerals, varying in size from two or more inches to the smallest grain that can be perceived by the eye. When the imbedded particles become extremely minute, greywacke passes into common clay-slate. When the particles and fragments are numerous, and the slate in which they are cemented can scarcely be perceived, greywacke becomes coarse sandstone or gritstone. When the fragments are larger and angular, greywacke might be described as a breccia with a paste of slate. When the fragments are rounded, it might not improperly be called an ancient conglomerate. When rocks of greywacke have a slaty structure, they form greywacke-slate.

Greywacke has by some of the French geologists been described as a transition sandstone, with a cement either of siliceous earth, or of slate. This definition agrees with the gritstones associated with the upper transition or mountain limestone. Where the paste is hard and siliceous, as I have observed in the greywacke of Savoy, that separates the primary from the secondary rocks, many of the siliceous particles may have been original concretions formed at the same time as the paste; and where these concretions are all composed of quartz, we may infer that such has been their mode of formation. In other instances, the fragments are evidently the débris of more ancient rocks, that have been broken down by some great catastrophe, and mixed with more recent beds at the period when they were forming. This mode of formation implies, that a considerable period elapsed between the formation of the primary and secondary rocks. The fragments are always those of lower rocks, and never of the upper strata. In some situations, immense beds of loose conglomerate, composed of large fragments and boulders of the lower rocks, separate the slate rocks from the calcareous formations: such conglomerates may be regarded as occupying the geological place of greywacke, and belonging to the greywacke formation.