

## DUCATEL'S GEOLOGICAL REPORT.

"The soils of the country are bedded upon primary rocks, with the exception of that portion lying between the Seneca and the Monocacy on the S. E. slope of Parr's Ridge and contiguous to the Potomac where the subjacent rocks are redshales and sandstones of the transition class.

"The Patuxent, which forms the N. E. boundary of the county, takes its rise among the argillites of Parr's Ridge, traversing in a S. E. direction the whole mass of primary rocks. A section made in the direction of its course exhibits the *talcose slates*, traversed by large veins of quartz succeeding to the *argillites* and passing into *sleatites* and soapstones; as at Etchison's Mills, followed by serpentine between this and Triadelphia Factory, where the rocks are gniesses that soon give place to a slaty hornblende, and this as usual passing into *talcose slates* and the latter into *sleatite*.

"On the other hand a section of the course of the Potomac, within the limits of the county, of which it forms the S. W. boundary, presents at the mouth of the Little Monocacy, and extending a short distance below that of the Seneca, rocks usually referred by geologists to the transition series. These are principally red and gray sandstones, that are extensively quarried near the mouth of the Seneca, below which they insensibly pass into shales and finally into *talcose slates* to be succeeded by hornblende, mica slate, gneiss and the usual granitic aggregates.

"The rocks just enumerated are the prevailing ones of the county, and occur together variously associated; so that transverse sections made through the beds of Seneca and of Rock Creek would nominally present the recurrence of the same kind of rocks.

"The prevailing rock in the basin of Rock Creek is the *talcose slate* traversed by veins of quartz frequently containing schorl, from which the numerous detached fragments of this mineral observed scattered over the surface of the country in all directions have doubtless proceeded.

"But although the *talcose slate* is the predominant rock in this region, it frequently passes into hornblende slate and sometimes into *steatites*, whilst very usually the beds of the streams expose to view the gniess, mica slate, sienite and compact hornblendes.

"It is on the East side of the Seneca basin that the principal mineral resource of the country has hitherto been discovered (chrome ore) occurring within quite a considerable tract of land in which serpentine is the prevailing rock."

With regard to rocks of value in construction; besides those that occur on the Seneca and are so well known, a kind of sandstone rock, very sufficient for ordinary purposes, though probably not admissable on the face of locks, is found on the Cabin Branch. A better sandstone is found on the Mill Branch of Rock Creek. Excellent granite appears in the valley of the Howlings River. There is an abundance of brick clay over the country judging from the places observed, where kilns had been or were in operation.