

## THE JURASSIC PERIOD.

The deposits in Maryland which are here doubtfully referred to the Jurassic period include the lower portions of what has been commonly denominated the Potomac formation, but which is now known to represent several quite distinct geological horizons. This thick series of strata which extends as a continuous belt from New Jersey southward across Maryland into Virginia and which occurs also in the South Atlantic and Gulf states can be separated upon both physical and paleontological grounds into four formations, the two lower known as the Patuxent and Arundel formations being provisionally referred to the Jurassic period.

**THE PATUXENT FORMATION.**—The Patuxent formation, so called from its typical development in the upper valleys of the Little and Big Patuxent rivers, is the basal formation of the Coastal Plain series, and is found lying directly upon the crystalline rocks of the Piedmont Plateau. It appears near the landward margin of the Coastal Plain and has been traced as a narrow and broken belt from Cecil county across Harford, Baltimore, Anne Arundel and Prince George's counties to the borders of the District of Columbia.

The deposits consist mainly of sand, sometimes quite pure and gritty, but generally containing a considerable amount of kaolinized feldspar, producing a clearly defined arkose. Clay lumps are at times scattered in considerable numbers through the arenaceous beds. Frequently the sands pass over gradually into sandy clays, and these in turn into argillaceous materials, which are commonly of light color, but often become highly colored and are locally not unlike the variegated clays of the Patapsco formation. The more arenaceous deposits are cross-bedded, and the whole formation gives evidence of shallow water origin. The Patuxent formation is estimated to attain a thickness of about 150 feet, but it may be considerably thicker at some points. No distinctive fossils have as yet been found in this formation in Maryland.

**THE ARUNDEL FORMATION.**—The Arundel formation, so called from Anne Arundel county, where the strata are well developed, consists of a series of large and small lenses of iron-ore bearing clays