Many of the layers show, by their shrinkage cracks, ripple-marks, and footprints, as others have observed, that they were formed in shallow waters, or existed as exposed mud-flats. But they accumulated till they were over a thousand feet thick in Virginia, and in New England two or three thousand, according to the lowest estimate. Hence the land must have been sinking to a depth equal to this thickness, as the accumulation went on, since the layers were formed successively at or near the surface.

Is it not plain, then, that the oscillations, so active in the Appalachian revolution and actually constituting it, had not altogether ceased their movements, although the times were so quiet that numerous birds and reptiles were tenants of the Connecticut region? Is it not clear that these old valleys, occurring at intervals from Nova Scotia to South Carolina, originally made by foldings of the earth's crust, were still sinking?

And did not the tension below of the bending rocks finally cause ruptures? Even so: and the molten rock of the earth's interior which then escaped, through the crystalline rocks beneath and the overlying sandstone, constitutes the trap mountains, ridges, and dykes, thickly studding the Connecticut Valley,

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shown to be above the carboniferous system. The first step towards a nearer determination of its age was made by Mr. J. H. Redfield in a paper on the Fossil Fishes of the Connecticut valley published in 1836, who made it Jurassic (Lias or Oolitic,) (Ann. Lyc. N. Hist. N. Y., vol. iv.) Mr. W. C. Redfield added to the facts bearing on this conclusion through discoveries made in New Jersey and Virginia. Prof. W. B. Rogers deduced from the coal plants of the Richmond beds, the same age for those beds, while admitting that other beds of the sandstone might be Triassic. Afterwards on finding the same Posidonia and Cypridæ in North Carolina, in each of the beds in Virginia, in the belt in Pennsylvania near Phenixville, and one plant (Lycopodites Williamsonis) common to Virginia and Massachusetts, he suggested that all the beds were probably Jurassic (Am. J. Sci. [2,] xix, 123.) Mr. E. Hitchcock, Jr., detected recently a fossil plant (*Clathropteris rectiusculus*, Am. J. Sci. [2,] xx, 22,) near the middle of the sandstone formation in Massachusetts, and remarks that it indicates the existence of the Lower Jurassic at that place, and also renders it probable that the Triassic may be represented in the inferior beds, as is sustained by Prof. Hitchcock. Prof. Emmons has recently obtained Reptilian Fish, and Molluscan fossils in North Carolina, (communicated to the Amer. Assoc. at Albany in August last,) which are related to those of the Triassic and Jurassic periods. The amount of evidence as far as now understood therefore tends to sustain the view that the Period of the sandstone, while it may cover part of the Triassic, is mainly Jurassic.