

sophic systems, to crop and prune them to predetermined shapes. Whither the known points us, let us follow; and if we can not discern things clearly, let us be content to see them "through a glass darkly." It would be stupidity to ignore the existence of a solar orb even in total eclipse.

This revulsion in the popular view has to some extent been produced by the weight of well-known names recorded against the doctrine of primordial fusion and continued central fluidity. Sir David Brewster denounces "the nebulous theory" as "utter nonsense;" and Mr. Evan Hopkins has publicly denied the accepted doctrine of a slow increase of temperature in penetrating toward the earth's centre. It is certain, however, that the facts upon which his denial rests have been generated by abnormal and perturbing influences. Mr. W. Hopkins several years since contended that the solidification of the earth must have begun at the centre, simultaneously with the formation of the superficial crust. Sir Wm. Thompson maintains that the rigidity of the earth is required by the phenomena of precession and nutation. Against these conclusions, however, Delaunay very recently opposes the results of experiments which show that a body of water inclosed in a rotating glass globe promptly partakes of the rotation of the globe, and becomes physically a part of it. The author remains decidedly of the opinion that the balance of evidence sustains the doctrine of central fluidity. The reader who desires to examine farther the objections urged against this doctrine may consult Hopkins (Wm.), in *Phil. Trans. of the Royal Society*, 1836, p. 382; also 1839-40-42; also *Quar. Jour. Geolog. Soc., Lond.*, vol. viii., p. 56; Thompson (W.), on the *Rigidity of the Earth*, in *Proceedings Roy. Soc.*, vol. xii., p. 103; Tyn-dall, in *Fortnightly Review*. On the subject of mountain-formation, see Hall (James), *Paleontology of New York*, vol. iv., Introduction; Dana (J. D.), *Address before the Amer. Assoc. for the Advancement of Science*, Providence, 1857.

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NOTE II., page 71.

As the recent discovery of traces of animal life two whole systems lower in the series of strata than had heretofore been known is an event of extraordinary importance in the progress of our knowledge of the world's preadamite history—insomuch that Sir Charles Lyell characterizes it as the greatest geological discovery of his time—I introduce here a somewhat complete series of references to the papers which have been published on the subject:

1858, May. Hunt (Dr. T. S.), Remarks on the presence of iron ores and graphite in Laurentian strata as affording evidence of the "existence of organic life even during the Laurentian or Azoic period."

*Amer. Jour. Sci. and Arts* [2], xxv., 436.

1858, Oct. Logan (Sir W. E.) received the first specimens of suspected