

tween the Block Island strata and those of Long Island and the islands to the eastward was commented upon by them and by others. If the article in question went no further than this it would attract but little attention. The conclusions which the author draws, however, are so startling that they require the earnest consideration of everyone who has ever had any experience in the geology of the region.

For example: "The well-known clay deposits of Long Island I have not carefully examined in place. *There is much in the published description of them, however, to indicate that they may represent some of the same Jurassic beds.*"

Inasmuch as the present writer thought that the Cretaceous age of the clays at Glen Cove, Northport, etc., had been thoroughly proven and the Tertiary age of others had at least been satisfactorily indicated,* the above surmise is highly interesting and any proofs of their Jurassic age are anxiously awaited.

Again, "The clay bluffs at Gay Head, in Martha's Vineyard have many characteristics of the same series, but the presence of Cetacean remains in one portion of them indicates that this is Tertiary. There are, however, some reasons for supposing that the most of the clays are much older, *and I believe that they contain representatives of the same great Jurassic formation.*"

As these deposits have been amply proven, by David White,† Merrill,‡ Shaler,§ and the writer,|| to consist of Cretaceous and later strata, the expression of a mere belief in regard to their Jurassic age seems somewhat superfluous.

In a postscript the author says that since his article was in print he has visited Long Island and Martha's Vineyard, and states: "On Martha's Vineyard I found that the great series of variegated clays forming Gay Head, *and gener-*

ally regarded as Tertiary, are certainly Mesozoic, and all apparently Jurassic."

In view of what has already been proven, the above statement is the most surprising of all, and as he concludes with the promise, "I hope soon to discuss this subject more fully elsewhere," the appearance of the discussion is looked for with great interest.

[The italics in the text are mine. A. H.]

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THE CURVE-TRACING TOP.

IN reply to Mr. C. B. Warring's suggestion of smoked surfaces, I would say that two of my students have for some time been engaged in computing the moment of inertia of the top from its mass, the radius of the point, the dip, the instantaneous period of precession and the difference of the cardinal radii of curvature of the curves drawn very nearly the maximum distance between two consecutive spires. They have tried lampblack surfaces, but have given them up because the substance is apt to flake off at sharp angles and the curves are not satisfactory. Mr. Warring's own design bears this out. Moreover, Mr. Warring seems to have missed the point of my article. I value the result in proportion to the simplicity of the means employed. To use lampblack and varnish is to go much out of one's way.

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NEW APPLES.

TO THE EDITOR OF SCIENCE: As a contribution to your freak apple discussion in your issue of September 4th, where the phenomenon is described as a pollen phenomenon, and continued in your issue of October 2d, I send the following cutting from John Lewis Child's Fall Catalogue of 1896:

"*Two-Faced*—We never brought out a more unique novelty than this. It originated in Cayuga county, N. Y., and the original tree has been known for many years, but this is the first time it has ever been propagated and put upon the market. The tree bears an apple which is in size and shape similar to the Tallman Sweet; its peculiarity being that every fruit

* *Trans. N. Y. Acad. Sci.*, xii. (1893), pp. 222-337; *ibid.* xiii. (1894), pp. 122-129. *Bull. Torr. Bot. Club*, xxi. (1894), pp. 49-65. *Trans. N. Y. Acad. Sci.*, xv. (1895), pp. 3-10.

† *Am. Journ. Sci.*, xxxix. (1890), pp. 93-101; *Bull. Geol. Soc. Am.*, i. (1890), pp. 554, 555.

‡ *Trans. N. Y. Acad. Sci.*, iv. (1885), pp. 78, 79.

§ *Bull. Mus. Comp. Zool.*, xvi., No. 5 (1889), pp. 89-97.

|| *Trans. N. Y. Acad. Sci.*, xiii. (1893), pp. 8-22; *Bull. Geol. Soc. Am.*, vii. (1895), pp. 12-14.