

general character and these limits of date would, therefore, agree closely with the little that we know of the Philistine occupation of Philistia. To call them the tombs of "Ægean Intruders" would, I think, be safe already: to label them provisionally "Philistine" would not be over-bold.

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### NOTES AND QUERIES.

*Earthquake Superstition.*—The *Quarterly Statement* for April contains two references to the recent excitement in Palestine in expectation of an earthquake. The well-known earthquake of 1837 destroyed a great part of Şafed, did damage in Tiberias, &c., and a recurrence was looked for because it was now 70 years since. On page 83, Dr. Masterman is quoted: "It seems that it is stated in the Zohar that under the earth there is a great sleeping beast—the Leviathan—and that every 70 years he has to change his position. When he does this an earthquake is produced." If I may be allowed, for brevity, to assume what I think I can prove, Leviathan corresponds to Typhon of the Egyptians, called by Wilkinson a snake-giant (*Anc. Egy.*, abridged ed., I, 330). He was thought of as lying along the underground path of the sun, from one equinox to the other—the winter half of the ecliptic circle. The equinoctial points slowly change, bringing the astronomical spring some twenty minutes earlier year by year. The rate is difficult to measure, and the change is to ordinary observation imperceptible. But it amounts to a whole day in 72 years; and this was perceived by the ancients. They had learned to identify midsummer day by the method of shadows; but they had also a method by the rising or the culmination of stars, and the sun and stars were found to fall more and more out of accord. The difference was one degree in 72 years, and on the recurrence of that period the festival of the solstice or the equinox must be held one day earlier. The insidious movement of precession had always been going on; but it was only when it amounted to a full day that a readjustment was called for in chart and calendar and ritual.

The practical shifting of the solstice or the equinox was the "earthquake:" the boundaries of the upper and lower hemispheres were changed, at the autumn point Leviathan had advanced his head, at the spring point he had withdrawn his tail.

The facts underlying the ancient mythology admitted of various expression in the symbolic language. In Mr. Macalister's diary of his visit to Safed (*Q.S.*, April, p. 111) we have a variant form of the present-day tradition. "Earthquakes are caused (according to local belief) by the turning of a monster who, Atlas-like, supports the earth—others say by the ox which balances the world on the tip of his horn throwing it to the other horn, to relieve his tensioned muscles."

This seems to direct us to the spring equinox and to a people whose New Year's Day was fixed at that season. There is a consensus of testimony that when the ancient calendars began, the spring constellation or sign was Taurus. A well-known line in Virgil implies distinctly that the year began (that the sun crossed the equator at spring) when the sun was on the Bull's horns. This was not really the case in Virgil's time—he only repeated the tradition of the fathers—and the date when the description was true would be, according to the late R. A. Proctor, B.C. 3400 (*Knowledge*, May, 1888). A system or calendar thus resting on the spring equinox in Taurus might be said to have the Bull constellation for its foundation. It is now well known that in the Assyrian calendar the spring sign was called Stone of Foundation, and the autumn sign the Stone opposite the Foundation. The precession of the equinox shifts this foundation, of course, and at about the period named by Mr. Proctor the equinoctial colure literally passed from one horn to the other, as the Bull is figured.

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