

CORRESPONDENCE.

*To the Editors of 'The Observatory.'**Assyrian Eclipses.*

GENTLEMEN,—

It is somewhat remarkable that in none of the ancient Egyptian inscriptions which have hitherto been examined is any record to be found of an actual eclipse of either the Sun or Moon, although obscure allusions to the fact of such phenomena taking place have been, as Mr. Renouf has pointed out, in several cases met with. It is well known, indeed, that Brugsch thought, notwithstanding the objections of Chabas, that in an inscription made at Thebes in the reign of Thakelath (Tiglath) II., of the twenty-second dynasty of Egyptian kings, mention is made of an eclipse of the Moon. I referred to this matter in the number of the 'Observatory' for April 1888 (vol. xi. p. 197) and pointed out that no eclipse occurred at the time mentioned. Mr. Renouf has since informed me that the inscription, rightly interpreted, so far from stating that an eclipse took place, states in fact the very reverse. It is scarcely worth while to refer to George Smith's theory that the eclipse of April 4, B.C. 945, is referred to in this inscription, since its true date is nearly two hundred years after this time.

But two, if not three, eclipses (of the Sun) do really appear to be recorded in the Assyrian inscriptions. The first of these occurred in B.C. 763 on the 15th of June, and was total in or near Nineveh. There appears no reason to doubt that it is mentioned in the Assyrian so-called 'Eponym Canon,' which was interpreted by Sir Henry Rawlinson in 1862, from the fragments of terra-cotta tablets brought over by Sir A. H. Layard and placed in the British Museum. The inscription in question states (as kindly translated for me by Mr. T. G. Pinches, of the British Museum) that in the "Eponymy of Bur-sagale, governor of Gozan, a revolt in Assur [the city] took place in the month Sivan and the Sun was eclipsed." This, according to the Canon, was in the eighth year of the reign of Assur-day-an, and the record must be allowed to fix subsequent dates in the Canon with a great precision. For although Oppert, by assuming a lacuna of 46 years in it, endeavoured to identify the eclipse with the annular one of June 13, B.C. 809, there seems little ground for this or doubt that the view of George Smith is correct, and the eclipse the total one of June 15, B.C. 763.

An eclipse is also mentioned in an Assyrian tablet in the British Museum, which would seem to have occurred in the reign of Esarhaddon. Mr. Pinches thus translates the portions referring to the eclipse:—"Since the king my lord went to Egypt, an eclipse has taken place in the month Tammuz [corresponding nearly to our own June]. When I brought the account of the eclipse of the month Tammuz, I sent it away to the presence of the king." It is very difficult to identify this eclipse with any resulting from

calculation; the only conjecture I can make is that it may have been one which occurred on the 27th of May, B.C. 699, and was annular in India.

The immediate successor of Esarhaddon was Assur-bani-pal. An inscription made in his reign was interpreted by Fox Talbot (see the Transactions of the Society of Biblical Archæology, vol. i. pp. 13 and 348) to record the occurrence of an eclipse of the Sun, which, at the suggestion of Oppert, was supposed to have been that of the 27th of June, B.C. 661. The inscription, as translated by Talbot, states that it took place whilst the king of Elam was preparing an attack upon Assyria, and that "for three days the evening Sun was darkened as on that day." No eclipse of course could produce such an effect as this; but he suggests that "it is not impossible that, in a very ignorant age, the report of such a wonder having happened in Susiana should be believed in Assyria, at the distance of many hundred miles, and have been chronicled by a superstitious scribe." Revising, however, a record by a conjectural process of this kind is always a hazardous proceeding, and on reading it I felt doubtful whether an eclipse was really referred to in the inscription. But Mr. Pinches has kindly examined it again, and considers that the eclipse and the three days' darkness at evening are distinct occurrences, forebodings of evil to the king of Elam. He thus, in fact, translates the passage:—"Te-umman devised evil, and Sin [the moon-god] devised against him forebodings of evil. In Tammuz an eclipse at evening—he troubled the lord of light and the setting sun thus also for three days was troubled—it went forth for the end of the reign of the [king] of Elam. This [omen] was the announcement of his [*i. e.* the god's] decision, which changeth not." Upon the whole, therefore, we may fairly conclude that the eclipse of June 27, B.C. 661, is really alluded to in this inscription.

If I am not pressing unduly upon your valuable space, I should like to state in conclusion that I have not succeeded in finding the reference to the eclipse of B.C. 776 (the first year of the first Olympiad), said, in 'L'Art de vérifier les Dates,' to have been recorded by Confucius in the Tchun-Isicou [Ch'un Is'ew], written about two hundred years after that time. I have consulted both the 'Observations' of Father Souciet, referred to in 'L'Art de vérifier,' and Dr. Legge's translation of the Ch'un Is'ew itself, in which it appears that the earliest eclipse mentioned is that which, according to our reckoning, took place on the 14th of February in the year B.C. 719. This agrees with the list given by our late Assistant Secretary, Mr. Williams, in the 24th volume of the 'Monthly Notices.'

Perhaps some one more versed in these matters will supply the reference to the eclipse of B.C. 776. Mr. Johnson, I need hardly remark, mentions it in his well-known work (of which many of us wish for a new edition) 'Eclipses Past and Future.'

Yours faithfully,

W. T. LYNN.

Blackheath, 1891, June 12.