

during which the cub protrudes the head from the belly of the mother, in order to browse, and withdraws it afterwards. Desirous of being better informed, I asked the people of Siraf and Oman, who visited this country, as well as merchants whom I had met in India. They all told me that the rhinoceros breeds just like the cow and the buffalo; and I do not know where El Djahiz has found this story, whether among his reading, or from his inquiries." This is evidently an obscure tradition about the Australian kangaroo, which had reached some part of Asia, and was connected with the rhinoceros by people who knew nothing about either of the two animals. Has the attention of zoologists been called to this story before?

Heidelberg, Germany,
December 5.

C. R. OSTEN SACKEN.

On an Undescribed Rudimentary Organ in Human Attire.

LECTURERS who are tired of the cockade hat-ribbon and tail buttons, may be glad to know of the following rudiment. The old-fashioned double eye-glass was a folder, with a knob at the outer side of the distal glass; and this on folding locked against a pin on the outer side of the proximal glass. The double eye-glass of the present day does not fold; but, none the less, is the knob outside the distal glass retained for it, though there is no pin to lock with on the proximal glass. How long will it take before this useless rudiment disappears? What will be the cause of its disappearance? As panmixia is out of the question, we may prophesy that it will be economy of material.

Cork, December 12.

MARCUS HARTOG.

EARLY ASTERISMS.¹

III.

The Constellations referred to in the Myth of Marduk and Tiāmat.

WE are indebted to the myth, then, for the knowledge that when it was invented the constellations Bull, Scorpion, Goat, and Fishes had been established.

This argument is strengthened by the following considerations suggested by Jansen:—

"We look in vain among the retinue of Tiāmat for an animal corresponding to the constellations of the zodiac to the east of the vernal equinox. This cannot be accidental. If therefore we contended that the cosmogonic legends of the Babylonians stood in close relationship to the phenomena of sunrise on the one hand and the entrance of the sun into the vernal equinox on the other; that, in fact, the creation legends in general reflect these events, there could not be a more convincing proof of our view than the fact just mentioned. The three monsters of Tiāmat, which *Marduk* overcomes, are located in the 'water-region' of the Heavens, which the Spring Sun *Marduk* 'overcomes' before entering the (ancient) Bull. If, as cannot be doubted, the signs of the zodiac are to be regarded as symbols, and especially if a monster like the goat-fish, whose form it is difficult to recognise in the corresponding constellation, can only be regarded as a symbol, then we may assume without hesitation that at the time when the Scorpion, the Goat-Fish, and the Fish were located as signs of the zodiac in the water-region of the sky, they already played their parts as the animals of Tiāmat in the creation legends. Of course they were not taken out of a complete story and placed in the sky, but conceptions of a more general kind gave the first occasion. It does not follow that all the ancient myths now known to us must have been available, but certainly the root-stock of them, perhaps in the form of unsystematic and unconnected single stories and concepts."

There is still further evidence for the constellation of the Scorpion.

Jansen remarks:—

¹ Continued from vol. xlviii. p. 520.

"A Scorpion-Man plays also another part in the cosmology of the Babylonians. The Scorpion-Man and his wife guard the gate leading to the Māšu mountain(s), and watch the sun at rising and setting. Their upper part reaches to the sky, and their *irtu* (breast?) to the lower regions (Epic of Gistubar 60,9). After Gistubar has traversed the Māšu Mountain, he reaches the sea. This sea lies in the east or south-east. However obscure these conceptions may be, and however they may render a general idea impossible, one thing is clear, that the Scorpion-Men are to be imagined at the boundary between land and sea, upper and lower world, and in such a way that the upper or human portion belongs to the upper region, and the lower, the Scorpion body, to the lower. Hence the Scorpion-Man represents the boundary between light and darkness, between the firm land and the water region of the world. *Marduk*, the god of light and vanquisher of Tiāmat, *i.e.* the ocean, has for a symbol the Bull=Taurus, into which he entered in spring. This leads almost necessarily to the supposition that both the Bull and the Scorpion were located in the Heavens at a time when the sun had its vernal equinox in Taurus and its autumnal equinox in Scorpio, and that in their principal parts or most conspicuous star groups; hence probably in the vicinity of Aldebaran and Antares, or at an epoch when the principal parts of Taurus and Scorpio appeared before the sun at the equinoxes."

If my suggestion be admitted that the Babylonians dealt not with the daily fight but with the yearly fight between light and darkness—that is, the antithesis between day and night was expanded into the antithesis between the summer and winter halves of the year; then it is clear that at the vernal equinox Scorpio setting in the west would be watching the sunrise; at the autumnal equinox rising in the east, it would be watching the sunset; one part would be visible in the sky, one below the horizon in the celestial waters. If this be so all obscurity disappears, and we have merely a very beautiful statement of a fact, from which we learn that the time to which the fact applied was about 3000 B.C., if the sun were then near the Pleiades.

Jansen in the above-quoted passages by implication, and in a subsequent one directly, suggests that not all the zodiacal constellations were established at the same time. The Babylonians apparently began with the easier problem of having six constellations instead of twelve. For instance, we have already found that to complete the present number, between

Scorpio.	Capricornus.	Pisces.
we must interpolate		
Sagittarius.	Aquarius.	

Aries and Libra seem also to be late additions according to Jansen, who writes:—

"We have already above (p. 90), attempted to explain the striking phenomenon that the Bull and Pegasus, both with half bodies only, *ἡμίτομοι*, enclose the Ram between them, by the assumption that the latter was interposed later on, when the sun at the time of the vernal equinox stood in the hind parts of the Bull, so that this point was no longer sufficiently marked in the sky. Another matter susceptible of a like explanation may be noted in the region of the sky opposite to the Ram and the Bull. Although we cannot doubt the existence of an eastern balance, still, as already remarked (p. 68), the Greeks have often called it *χρηλαί* 'claws' (of the Scorpion), and according to what has been said above (p. 312), the sign for a constellation in the neighbourhood of our Libra reads in the Arsacid inscription 'claw(s)' of the Scorpion. These facts are very simply explained on the supposition that the Scorpion originally extended into the region of the Balance, and that originally α and β Libræ represented the 'horns'