X. *On the Chinese Year.* By J. F. Davis, *Esq. F.R.S.*

Read December 19, 1822.

All investigation into the Chinese knowledge of astronomy tends only to prove, that before the introduction of that science into the empire, first by the Arabians, and afterwards by the European missionaries, they were wholly ignorant of its principles. It is true that Confucius has recorded thirty-six eclipses of the sun, the greater number of which have been verified by the calculations of European astronomers: but, as has been very truly observed, the *recording* an eclipse may prove the authenticity of historical annals, while, at the same time, it proves nothing as to the existence of astronomical science. As far as related to the mere *observation* of the sky, the Chinese have, from the earliest periods, been very particular and assiduous. The remark of Du Halde, that "all these observations are not a little serviceable in ascertaining their chronology," is very true, but they by no means prove (what he sometimes appears desirous to establish), that the Chinese were astronomers.

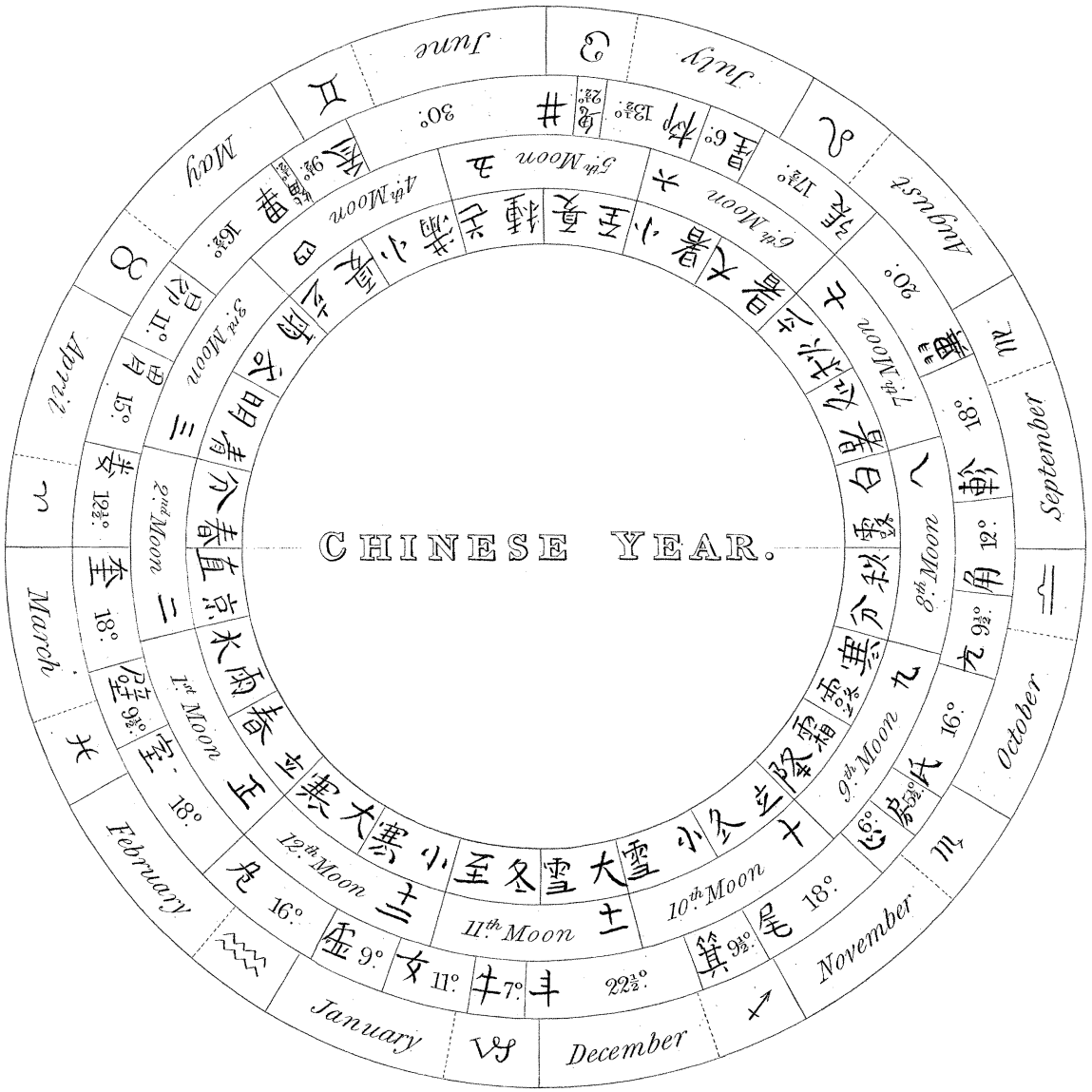
On this one subject, that singular nation has deviated from its established prejudices and maxims against introducing what is foreign; and that a people so self-sufficient and vain, should at once, in open violation of their general practice, have adopted the science of foreigners, and raised its professors to high dignities, is the strongest possible proof that they had no science of their own.* It even appears

* The most sensible estimate of the extent of Chinese knowledge has been made by Renaudot, in his observations on the accounts of the Arabian travellers.

that they have in former times adopted the very *errors* of European astronomy. The writer of this discovered, in an old Chinese book, the most exact delineation of the Ptolemaic system, with its crystalline orbs, primum mobile, &c. &c. and the earth occupying a conspicuous place in the centre of all. Indeed it is impossible not to smile at the idea of attributing any science to a people whose learned books are filled with such trumpery as the diagrams of Fo-hi, and a hundred other puerilities of the same kind.

There cannot be a doubt that the instruments mentioned by DU HALDE, as having been found by the missionaries on their first entrance into the country, were constructed by the Arabians. His observation, that "the uses of these instruments were written in Chinese characters, with the names of the constellations, which are 28 in number," proves nothing to the contrary. The guns which were cast for the Chinese by Europeans, were always inscribed with Chinese characters; and the ungrateful vanity of that people has invariably led them, when they have borrowed any thing from foreigners, to conceal the debt as much as possible. In proof of this, the writer is able to state the following fact: when Mr. PEARSON made them his invaluable present of the vaccine inoculation, it was accompanied by a small pamphlet in Chinese, containing a few necessary directions as to the use of the virus, and stating the discovery to have been English. An *expurgata* edition of this little book was very soon after published, in which not one word was retained as to its origin, nor any trace by which it could be known that the discovery of vaccination was otherwise than Chinese.

In the accompanying view [Pl. XIII.] of the Chinese year, are marked down, in the outer circle of all, the signs of our


CHINESE YEAR.
January
February
March
April
May
June
July
August
September
October
November
December
1st Moon
2nd Moon
3d Moon
4th Moon
5th Moon
6th Moon
7th Moon
8th Moon
9th Moon
10th Moon
11th Moon
12th Moon

European zodiac, for the sake of comparison; and in the second circle is described *their* zodiac, or the twenty-eight constellations, with the same number of degrees affixed to each, as are given to them in the Chinese books, making 360 in all. It will be observed that they are extremely unequal, the largest, 井 *tsing*, consisting of 30 degrees, and the least, 觜 *tsuy*, of not more than about half a degree. Of these 28 constellations, 角 *Kiŏ*, denoted by Spica Virginis, is considered as the first in order.*

In the circle next to the constellations are noted the Chinese moons, or months, of which 正 *ching* is the 1st, 二 *urh* is the 2nd, &c.: and in the innermost circle are described the 24 *Tsiĕ-ky*, or divisions of half moons, each consisting of about 15 days. Their names have a reference to some prevailing circumstance in each season, as 雨水 *Yu-shuy*, "rain and water," 清明 *tsing-ming*, "clear and bright," 大雪 *ta-siŭ*, "much snow," &c.

The Chinese, as far as the writer of this knows, have no solar year, unless their celebration of a grand festival at the 冬至 *tung-chy*, or winter solstice, may be considered as an observance of its annual limits. DU HALDE says, that

* These constellations are generally found written on the Chinese compass, together with the diagrams of Fo-hi, the *five* elements (viz. fire, water, *wood*, stone, and metal, a division strikingly philosophical) and various other characters used in fortune-telling.

"their (solar) year is composed of 365 days and somewhat less than 6 hours, and from an epocha regulated by the winter solstice, which was the fixed point of their observations, as the 1st degree of Aries is of ours, reckoning from a hundred to a hundred degrees, they calculated the motions of the planets, and adjusted all things by equation tables: some supposed that they received them from the Arabians, who entered with the Tartars into China." He afterwards acknowledges, that "though the Chinese have distinguished the course of the sun into 365 days and 15 minutes, of which we compose one year, they regard more the lunations, than the course of the sun."

The Chinese year, properly considered as such, is in fact a lunar year, consisting of twelve months of twenty-nine and thirty days alternately, with the triennial intercalation of a thirteenth month, to make it correspond more nearly with the sun's course.* It has not been discovered (with any degree of certainty), *why* they fix upon the 15th degree of Aquarius as a rule for regulating the commencement of their lunar year: but they have an annual festival about the recurrence of this period 立春 which bears a considerable resemblance to the deification of the bull Apis; and this resemblance is increased by the connection of both ceremonies with the labours of agriculture, and with the hopes of an abundant season.† This coincidence may serve to fortify the opinions of those who are fond of tracing the Chinese to the Egyptians; although the possibility of such a derivation has been ably disproved by M. DE PAUW.

* I call this intercalation triennial, because that is the nearest approximation; but in fact it is seven times in nineteen years.

† For a detail of the Chinese ceremony, vide MORRISON's view of China, p. 109.

An astronomical work, in which the writer of this found the Chinese planisphere, comprised in 12 charts of the heavens, mentions the N. Pole as being 36° above the horizon, and hence he concludes, that what it contains is independent of the astronomy which was afterwards introduced by the European Missionaries, because, as the elevation of the pole at any particular place is the latitude of that place, it is probable the contents of this book were compiled when the Chinese Court and observatory were in Honan, a part of which province is as high as 36° N. It appears from DU HALDE, that the astronomical instruments, mentioned above as having been constructed by the *Arabians* for the Chinese, were calculated for 36° latitude.

Mr. REEVES, of Canton, has with much labour compared the modern Chinese planisphere with the European constellations, and his catalogue of stars is printed at the end of Dr. MORRISON's Dictionary.

J. F. DAVIS.