antecedent to the latter's formation; they certainly were the Mas-mas, or Twins, of the Assyrians, independent of the rest of the figure.

As a convenient measuring-rod it may be noted that a and  $\beta$  stand  $4^{1}2^{2}$  apart; and this recalls an early signification of their *manzil* title, Al Dhira, the Arabs' Ell measure of length that the stars were said to indicate. This naturally became the dual **Al Dhirā'ān** that also was used on the Desert for other similar pairs of stars.

## Y, 2.2, brilliant white.

Almeisan, Almisan, Almeisam, and Almisam are from Al Maisan, the Proudly Marching One, its early Arabic name, which Al Firuzabadi, however. said was equally applicable to any bright star.

Riccioli called it **Elhenaat**, but **Alhena** is now generally given to it, from **Al Han'ah**, the 4th manzil,  $\gamma$ ,  $\mu$ ,  $\nu$ ,  $\eta$ , and  $\xi$ , in the feet of the Twins. This word, usually translated a Brand, or Mark, on the right side of a camel's, or horse's, neck, was defined by Al Bīrūnī as Winding, as though the stars of this station were winding around each other, or curving from the central star; and they were **Al Nuḥātai**, the dual form of Al Nuḥāt, a Camel's Hump, itself a curved line. Some Arabic authority found in them, with  $\chi^1$  and  $\chi^2$  of Orion, the **Bow** with which the Hunter is shooting at the Lion.

In Babylonia  $\gamma$  marked the 10th ecliptic constellation, **Mash-mashu-sha-Risū**, the Twins of the Shepherd (?), and, with  $\eta$ , probably was **Mas-tab-ba-tur-tur**, the Little Twins; and, with  $\eta$ ,  $\mu$ ,  $\nu$ , and  $\xi$ , all in the Milky Way. may have been the Babylonian lunar mansion **Khigalla**, the Canal, and the equivalent Persian **Rakhvad**, the Sogdian **Ghathaf**, and the Khorasmian **Gawthaf**.

## ô, Double, 3.8 and 8, pale white and purple.

Wasat and Wesat are from Al Wasat, the Middle, i. c. of the constellation; but some have referred this to the position of the star very near to the ecliptic, the central circle.

In China it was Ta Tsun, the Great Wine-jar.

The components are 7" apart, with a position angle of 203°, and may form a binary system.

Just north of  $\delta$  lies the radiant point of the **Geminids**, visible early in October; another stream of meteors bearing the same title appearing from the northeastern border of the constellation and at its maximum on the 7th of December.

ε, Double, 3.4 and 9.5, brilliant white and cerulean blue.

Mebsuta is from Al Mabsuțăt, the Outstretched, from its marking the extended paw of the early Arabic Lion, but now it is on the hem of Castor's tunic. Burritt had it Melucta in his Geography, and Mebusta in his Atlas; Professor Young, following English globes, has Meboula; and elsewhere we find Menita, Mesoula, and Mibwala.

 $\varepsilon$ ,  $\delta$ ,  $\lambda$ , and others near by, were the Chinese **Tung Tsing**.

ζ, Variable, 3.7 to 4.5, pale topaz.

**Mekbuda** is from **Al Makbūdah**, Contracted, the Arabic designation for the drawn-in paw of the ancient Asad; but some, with less probability, derive it from **Al Mutakabbidah**, a Culminating Star.

Its variations, discovered by J. F. Julius Schmidt at Athens in 1847, have a period of about ten days, but Chandler says that definitive investigations are not completed. Lockyer thinks it also a spectroscopic binary.

## $\eta$ , Binary and variable, 3.2 to 3.7, and 9.

**Propus** is from the  $\Pi\rho\delta\pi\sigma\nu\varsigma$  of Hipparchos and Ptolemy, indicating its position in front of Castor's left foot, and is its universal title, with the equivalent **Pracess**. Riccioli wrote it  $\Pi\rho\delta\pi\sigma\varsigma$ , and Flamsteed gave both  $\Pi\rho\delta\pi\sigma\iota\varsigma$  and **Propus**; but Tycho had applied this last to the star Fl. 1 among the *extras* of Gemini. This position of  $\eta$  similarly made it the **Pish Pai** of the Persians.

Bassus and Hyginus said **Tropus**, Turn, referring to the apparent turning-point of the sun's course at the summer solstice, which now is more precisely marked by the star y just eastward from  $\eta$ ; and Flamsteed also had  $T\rho\delta\eta\sigma_{C}$ .

Flammarion's assertion that Hipparchos knew  $\eta$  as a distinct constellation, **Propus**, does not seem well founded.

Tejat prior is from Al Taḥāyī, an anatomical term of Arabia by which it was known in early days; a name also applied to stars in the head of Orion. The Arabs included it with  $\gamma$  and  $\mu$  in their Nuḥātai; the Chinese knew it as Yuē, a Battle-ax; and in Babylonia it marked the 8th ecliptic constellation, Maru-sha-pu-u-mash-mashu, the Front of the Mouth of the Twins.

It portended lives of eminence to all born under its influence.

The variability of  $\eta$  was discovered by Schmidt in 1865, and its period is now considered as 229-231 days; in 1881 Burnham found it double, the components 1".08 apart, and likely to prove an interesting binary system.