$\beta$ , Double, 3.3 and 8, white and blue.

**Alfirk** is now current for this star, although originally given to a; and **Ficares** is occasionally seen, from one of the degenerated names for the whole constellation that also may have been applied by the Arabs to other of its brighter stars.

The components are about 14" apart, and the position angle is 251°.

## γ, 3.5, yellow.

Errai of the Palermo and Er Rai of other catalogues, but sometimes Arrai, is from Al Rāi', the Shepherd, a title indigenous to Arabia.

In China it was Shaou Wei, a Minor Guard.

 $\gamma$  now marks the left knee of the King, and will be the pole-star of 2600 years hence.

 $\delta$ ,  $\varepsilon$ ,  $\nu$ , and  $\zeta$ , of about the 4th magnitude, were the Chinese **Tsaou Foo**, a charioteer of Mu Wang, the 5th emperor of the Chow dynasty, 5.36 B. C.

 $\delta$  is a noted double, the yellow and blue components 41" apart, at a position angle of 192°. The smaller is of the 7th magnitude, but the larger varies from 3.7 to 4.9 in a period of  $10\frac{2}{3}$  days. This was discovered by Goodricke 1 in 1784; and Belopolsky thinks it a spectroscopic binary, the period of revolution equaling the period of variation.

From its neighborhood radiate the **Cepheid** meteors, visible from the 10th to the 28th of June.

Surrounding  $\delta$ ,  $\varepsilon$ ,  $\zeta$ , and  $\lambda$ , which mark the King's head, is a vacant space within the southern edge of the Milky Way similar to the Coal-sacks of the Northern and Southern Cross.

 $\eta$  and  $\theta$ , 4th-magnitude stars on and near the right wrist, mark Al Kidr.

 $\kappa$ , a double star, 4.4 and 8.5, is the Chinese **Shang Wei**, the Higher Guard. The components are yellow and blue, 7".5 apart, at a position angle of 124°.

## 12, Irregularly variable, 4(?) to 5(?), garnet,

about 5° east of the head of Cepheus, is Sir William Herschel's celebrated **Garnet Star**, and so entered by Piazzi in the *Palermo Catalogue*, yet strangely omitted from Flamsteed's list, perhaps owing to its variability. This, suspected by Hind in 1848, was confirmed by Argelander.

1 John Goodricke of York, England, is still remembered in the astronomy of the last century as a diligent and successful observer of variable stars, although he was a deaf-mute and died at the early age of 22 years.