

centre about 50° south of the star Spica below Hydra's tail; but Aratos located it entirely under the Scorpion and the Claws, an error that Hipparchos criticized. It shows in the latitude of New York City only a few of its components in the bust, of which θ , a variable 2d-magnitude on the right shoulder, is visible in June about 12° above the horizon when on the meridian, and 27° southeast from Spica, with no other star of similar brightness in its vicinity. It was this that Professor Klinkerfues of Göttingen mentioned in his telegram to the Madras Observatory, on the 30th of November, 1872, in reference to the lost Biela comet which he thought had touched the earth three days previously and might be found in the direction of this star.

ι on the left shoulder, a $2\frac{1}{2}$ -magnitude, is about 11° west of θ .

Gould's list contains 389 naked-eye stars in this constellation.

One of the remarkable nebulae of the heavens, N. G. C., 3918, was discovered here by Sir John Herschel, who called it the **Blue Planetary**, "very like Uranus, only half as large again."

A 7th-magnitude *nova* that appeared in Centaurus between the 14th of June and the 8th of July, 1895, has changed since its discovery to a gaseous nebula, as has been the case with recent *novae* in Auriga, Cygnus, and Norma.

α , Binary, 0.2 and 1.5, white and yellowish.

Baily's edition of Ulug Beg's catalogue gives this as **Rigil Kentaurus**, from **Al Rijl al Kentaurus**, the Centaur's Foot; describing it as on the toe of the right front hoof, and Bayer so illustrated it. Chrysococca had the synonymous *πους κοντουρος*; and our *Century Dictionary* retains **Rigel**, although this is better known for the bright star in Orion. Burritt located on the left fore hoof a 4th-magnitude star that he wrongly lettered α ; and above the pastern our 1st-magnitude, also lettered α , with the title **Bungula**, which I find only with him and the *Standard Dictionary*. He gives no explanation of this, nor can I trace it further; it may be a word specially coined by Burritt from β and *ungula*, the hoof, although even in this the letter is wrong.

Ideler said that α and β also have been the Arabic **Ḥaḍar**, Ground, and **Wazn**, Weight, as is explained at the star β ; but he seemed at a loss as to the proper assignment of these words, although inclining to **Ḥaḍar** for β .

These two stars were among the much discussed **Al Muhlifain** described at γ Argus and δ Canis Majoris.

Alpha's splendor naturally made it an object of worship on the Nile, and

its first visible emergence from the sun's rays, in the morning at the autumnal equinox, has been connected by Lockyer with the orientation of at least nine temples in northern Egypt dating from 3800 to 2575 B. C., and of several in southern Egypt from 3700 B. C. onward. As such object of worship it seems to have been known as **Serk-t**.

It bore an important part, too, in southern China as the determinant of the stellar division **Nan Mun**, the South Gate.

α lies in the Milky Way, 60° south of the celestial equator, culminating with Arcturus, but is invisible from north of the 29th parallel. It is of the greatest interest to astronomers, being, so far as is now known, the nearest to our system of all the stars, although more than 275,000 times the distance of the earth from the sun,—92,892,000 miles,—and 100 millions of times the distance from the earth to the moon,—238,840 miles. Its parallax, first taken at the Cape of Good Hope by Henderson in 1839, and later by Gill and Elkin, and now fixed at $0''.75$, shows a distance equal to that traveled by light in $4\frac{1}{3}$ years.

We can better realize the immensity of this distance from Professor Young's statement that if the line from the earth to the sun's centre be represented as 215 feet long, one to this star would be 8000 miles; and from Sir John Herschel's illustration :

to drop a pea at the end of every mile of a voyage on a limitless ocean to the nearest fixed star, would require a fleet of 10,000 ships of 600 tons burthen, each starting with a full cargo of peas.

The nicety of parallactic observation, too, is shown by the fact that "an angle of $2''$ is that in which a circle of $\frac{1}{10}$ of an inch in diameter would be seen at the distance of a mile."

Were our sun removed to the distance of α Centauri, its diameter of 866,400 miles would subtend an angle of only $\frac{1}{13}$ of a second of arc, of course utterly inappreciable with the largest telescope; and if seen from that star, would appear as a 2d-magnitude near the chair of Cassiopeia.

α was first discovered to be double by Richaud at Pondicherry, India, in 1689; but there seems discrepancy in the magnitudes respectively attributed to the components. Early astronomers thought the lesser star, α^1 , a 4th-magnitude; even recently Gould has estimated it as $3\frac{1}{2}$; yet Miss Clerke writes, "the lesser, though emitting only $\frac{1}{3}$ as much light as its neighbour, is still fully entitled to rank as of the 1st magnitude"; all of which may indicate an increase of brilliancy since its observation began. Together they give nearly four times as much light as the sun, while their mass is double that of the latter.

The period of orbital revolution is about eighty-one years; the position angle in 1897, 208° ; and they now are $21''.5$ apart,—about 2700 millions of miles,—and yet connected! This distance is increasing.

Their proper motion, $3''.7$ annually, or about 446 millions of miles across the line of vision, will carry them to the Southern Cross in 12,000 years.

The spectrum of α^2 , the larger star, is midway between the Sirian and Solar.

β , 1.2.

Burritt located this near the right fore leg, calling it **Agena**, but gave no meaning or derivation of the word, and I have not found it elsewhere; Bayer placed it on the left hind quarter.

Hadar and **Wazn**, Ground and Weight, seem to have been applied without much definiteness to α and β of this constellation, and to stars in **Argo**, **Columba**, and **Canis Major**, probably on account of their proximity to the horizon; the meridian altitude of β , 1000 years ago at Cairo, in 30° of north latitude, being only 4° . Hyde, however, said that α and γ were the stars referred to by these Arabic titles.

The Chinese call β **Mah Fuh**, the Horse's Belly.

This and α are the **Southern Pointers**, *i. e.* towards the Southern Cross, often regarded as the Cynosure of the southern hemisphere.

The Bushmen of South Africa knew them as **Two Men that once were Lions**; and the Australian natives as **Two Brothers** who speared Tchingal to death, the eastern stars of the Cross being the spear points that pierced his body.

γ , 2.4, that Bayer placed on the right fore foot, with τ , 4.4, were the early Chinese **Koo Low**, an Arsenal Tower; and δ , 2.8, was the later **Ma Wei**, the Horse's Tail.

The early ϵ , ζ , ν , and ξ^2 , the four *Dictis a nautis Croziers* of Halley's catalogue, are the Southern Cross; ζ probably being Al Tizini's **Al Nā'ir al Baṭn al Kentaurus**, the Bright One in the Centaur's Belly.

θ , Double and variable, 2.2 to 2.7 and 14.3, red and bluish,

appears in the *Century Cyclopedia* as **Chort**, an error from the editor's writing *Centauri* for *Leonis*, this letter and title really belonging to θ Leonis, on the hind quarter of the Lion near the Ribs, that the Arabic **H-ārātan** signifies. θ in this constellation marks the left shoulder of the figure.

Harvard observers at Arequipa have reported an 8th-magnitude com-