

country, on the 9th of June, A. D. 118, one of the early records of that planet.

ζ, Ternary, 5.6, 6.3, and 6, yellow, orange, yellowish,—changing.

This lies on the rear edge of the Crab's shell, and is known as **Tegmine**, In the Covering; but, if the word be allowable at all, it should be **Tegmen**, as Avienus is supposed to have had it. Ideler, however, said that Avienus was referring to the covering shell of the marine object, and not to the stellar.

This is a system of great interest to astronomers from the singular changes in color, the probable existence of a fourth and invisible component, and for the short period of orbital revolution—sixty years—of the two closer stars. The maximum of interval between these is but 1'', the minimum 0''.2; yet they never close up as one star. The third member is 5'' away, and its orbital period must be at least 500 years.

ζ and θ, according to Peters' investigations, probably are the objects announced by Watson as two intra-Mercurial planets, discovered (?) during the total eclipse of the sun on the 29th of July, 1878.

λ, of the 6th magnitude, with adjacent stars, was in China **Kwan Wei**, the Bright Fire.

μ, a 5½-magnitude, with χ Geminorum, was **Tsih Tsin**, a Heap of Fuel.

ξ, another 5½-magnitude, with λ Leonis, formed the seventh *manzil* **Al Tarf**, the End, or, as some translate it, the Glance, *i. e.* of the Lion's Eye, the ancient Asad, which occupied so large a portion of the sky in this neighborhood. They also were the Persian **Nahn**, the Nose, and the Coptic **Piautos**, the Eye, both lunar asterisms.

ξ, with κ and stars in Leo, was the Chinese **Tsu Ke**, one of the flags of that country.



Boötes hath unleash'd his fiery hounds.

Owen Meredith's *Clytemnestra*.

### **Canes Venatici, the Hunting Dogs,**

are the French **Chiens du Chasse**, or **Levriers**; the German **Jagdhunde**, and the Italian **Levrieri**, lying between Boötes and Ursa Major. Ptolemy entered their stars among the ἀμόρφωτοι of the latter constellation, and the

modern forms first appear in the *Prodromus* of their inventor Hevelius. The more northern one is **Asterion**, Starry, from the little stars marking the body; and the other, which contains the two brightest stars, is **Chara**, as Dear to the heart of her master. Flamsteed followed in the use of these names, and the **Hounds** are now well established in the recognition of astronomers, as is the case with most of the stellar creations of Hevelius, which were generally placed where needed.

Proctor, in his attempt to simplify constellation nomenclature, called them **Catuli**, the Puppies; but the usual illustration is of two Greyhounds held by a leash in the hand of Boötes, ready for pursuit of the Bear around the pole; their inventor thus reviving the idea that Boötes was a hunter.

Hevelius counted 23 stars here; Argelander, 54; and Heis, 88.

The Chinese designated three stars in or near the head of Asterion as **San Kung**, the Three Honorary Guardians of the Heir Apparent.

Assemani alluded to a quadrate figure on the Borgian globe, below the tail of the Greater Bear, as **Al Karb al Ibl**, the Camel's Burden, that can be no other than stars in the heads of the Hunting Dogs.

Bartschius drew on his map of this part of the sky the **River Jordan**, his **Jordanis** and **Jordanus**, not now recognized, indeed hardly remembered. Its course was from Cor Caroli, under the Bears and above Leo, Cancer, and Gemini, through the stars from which Hevelius afterwards formed Leo Minor and the Lynx, ending at Camelopardalis. But the outlines of his stream were left somewhat undetermined, much like those of Central African waters when guessed at by map-makers thirty years or more ago. This river, however, had already existed before his day on French star-maps and -globes.

$\alpha$ , Double, 3.2 and 5.7, flushed white and pale lilac.

This star, the 12 of Flamsteed's list of the Hounds, stands alone, marking Chara's collar; but was set apart in 1725 by Halley, when Astronomer Royal, as the distinct figure **Cor Caroli**, not Cor Caroli II as many have it, in honor of Charles II. This was done at the suggestion of the court physician, Sir Charles Scarborough, who said that it had shone with special brilliancy on the eve of the king's return to London on the 29th of May, 1660. It has occasionally been seen on maps as the centre of a Heart-shaped figure surmounted by a crown, and its name occurs in popular lists; but Flamsteed did not insert it on his plate of the Hounds, although he distinctly wrote of it in his manuscript under this title; and the Heart perhaps is shown in the tail-piece to the preface of the *Atlas Coelestis*.

It is the French **Coeur de Charles**; the Italian **Cuor di Carlo**; and the German **Herz Karls**.

With Ulug Beg it was **Al Kabd al Asad**, the Liver of the Lion,—here a technical term indicating the highest position of any star within the compass of a figure reckoned from the equator.

In China it was **Chang Chen**, a Seat.

This is a favorite object with amateur observers, the components being about 20'' apart. Espin says, in Webb's *Celestial Objects* of 1893, that they have been relatively fixed for seventy-three years, yet show considerable proper motion, and probably are unequal stars at nearly equal distances from us; and he gives various opinions of observers as to their colors. Miss Clerke calls them pale yellow and fawn. Their present position angle is about  $230^\circ$ , but is slowly changing.

Cor Caroli culminates on the 20th of May.

On the line from Cor Caroli to Arcturus, and somewhat nearer the latter, in a triangle of small stars, is a beautiful globular cluster concentrated into a central blaze. This is N. G. C. 5272, 3 M., long a well-known object, but recently rendered specially noticeable by Bailey's discovery in 1895, on photographs taken by Harvard astronomers at Arequipa, Peru, of no less than ninety-six variable stars within its boundaries,—nearly ten per cent. of the whole number in the cluster distinctly photographed: the usual proportion of variables among the naked-eye stars is not quite one per cent. The stars near the centre run together and cannot be counted, but the total number in the cluster probably is many thousands.

$\beta$ , 4.3, is **Chara**, the 8 of Flamsteed, and, after Cor Caroli, the brightest member of the Southern Hound.

152 Schjellerup, 5.5, brilliant red.

**La Superba** was so named by Father Secchi from the superbly flashing brilliancy of its prismatic rays. It is the brightest of its class of stars with spectra of the 4th type, of which only about 120 are known from our latitude, and but seven or eight of these visible to the naked eye. Variability in its light is also suspected.

It lies about  $7^\circ$  north and  $2\frac{1}{2}^\circ$  west of Cor Caroli.

A misty spot in this constellation can be seen with a low-power  $3^\circ$  southwest from Al Kaid ( $\eta$  Ursae Majoris). This is the **Spiral Nebula** of Lord Rosse, or the **Whirlpool Nebula**, N. G. C. 5194, 51 M., our long-established ideas of which have recently been somewhat modified by a photograph taken by Mr. Isaac Roberts after four hours' exposure. It now appears to