

in the *Alfonsine Tables* and other bygone lists; **Shalyāk** and **Sulahfāt**, words for the Tortoise, Ulug Beg's translator having the former as **Shelyāk**, which Piazzi repeated in his catalogue; **Salibāk**, which heads Kazwini's chapter on the Lyre;—Ideler tracing these Arabic words to *Xέλνς*. They were turned into **Azulafe** and **Zuliaca** in the original *Alfonsine Tables*, and **Schaliac** in Chilmead's *Treatise*. The *Almagest* of 1515 combines all these figures for Lyra's stars in its *Allore: et est Vultur cadens: et est Testudo*; while that of 1551 says **Lyrae Testudo**.

But, notwithstanding the singularly diverse conceptions as to its character, the name generally has been Lyra, and the figure so shown. Roman coins still in existence bear it thus, as does one from Delos, Apollo's birth-place in the Cyclades; and Cilician money had this same design with the head of Aratos on the obverse. The *Leyden Manuscript* has the conventional instrument, with side bars of splendid horns issuing from the tortoise-shell base; the Venetian *Hyginus* of 1488, with a similar figure, calls it **Lura** as well as Lyra; but the drawing of Hevelius shows "an instrument which neither in ancient nor in modern times ever had existence." Dürer's illustration, as well as others, places it with the base towards the north.

Lyra is on the western edge of the Milky Way, next to Hercules, with the neck of Cygnus on the east, and contains 48 stars according to Argelander, 69 according to Heis. Its location is noted as one of the various regions of concentration of stars with banded spectra, Secchi's 3d type, showing a stage of development probably in advance of that of our sun.

From near its α , 5° southwest of Wega, radiate the swiftly moving **Lyræids**, the meteors which are at their maximum of appearance on the 19th and 20th of April, but visible in lesser degree from the 5th of that month to the 10th of May. These have been identified as followers of the comet 1 of 1861.

. . . azure Lyra, like a woman's eye,
Burning with soft blue lustre.

Willis' *The Scholar of Thebet ben Khorat*.

α , 0.3, pale sapphire.

Wega, less correctly **Vega**, originated in the *Alfonsine Tables* from the Wākī of the Arabs, Bayer having both titles; Scaliger, **Waghi**; Riccioli, **Vuega vel Vagieh**; and Assemani, **Veka**.

The Greeks called it *Λύρα*, which, in the 16th-century *Almagests* and *Tables*, was turned into **Allore**, **Alahore**, and **Alohore**.

Among Latin writers it was **Lyra**, in classical days as in later, seen in

the *Almagest* of 1551 as *Fulgens quae in testa est & vocatur Lyra*; and in Flamsteed's *Testa fulgida dicta Lyra*; but Cicero also used **Fidis** specially for the star, as did Columella and Pliny **Fides** and **Fidicula**, its preëminent brightness fully accounting for the usurpation of so many of its constellation's titles, indeed undoubtedly originating them. In Holland's translation of Pliny it is the **Harp-star**.

The Romans made much of it, for the beginning of their autumn was indicated by its morning setting. It was this star that, when the hour of its rising was alluded to, called forth Cicero's remark, "Yes, if the edict allows it,"—a contemptuous reference to Caesar's arbitrary, yet sensible, interference with the course of ancient time in the reformation of the calendar, an interference that occasioned as much dissatisfaction in his day as did Pope Gregory's reform¹ in the 16th century.

Sayce identifies Vega, in Babylonian astronomy, with **Dilgan**, the Messenger of Light, a name also applied to other stars; and Brown writes of it:

At one time Vega was the Pole-star called in Akkadian **Tir-anna** ("Life of Heaven"), and in Assyrian **Dayan-same** ("Judge of Heaven"), as having the highest seat therein;

but fourteen millenniums have passed since Vega occupied that position!

The Chinese included it with ϵ and ζ in their **Chih Neu**, the Spinning Damsel, or the Weaving Sister, at one end of the Magpies' Bridge over the Milky Way,—Aquila, their Cow Herdsman, being at the other; but the story, although a popular one not only in China, but also in Korea and Japan, is told with many variations, parts of Cygnus sometimes being introduced.

These same three stars were the 20th *nakshatra*, **Abhijit**, Victorious, the most northern of these stellar divisions and far out of the moon's path, but apparently utilized to bring in this splendid object; or, as Mueller says, because it was of specially good omen, for under its influence the gods had vanquished the Asuras; these last being the Hindu divinities of evil, similar to the Titans of Greece. It was the doubtful one of that country's lunar stations, included in some, but omitted in others of their lists in all ages of their astronomy, and entirely different from the corresponding *manzil* and *sieu*, which lay in Capricorn. The Hindus figured it as a

¹ The English refused to adopt this reform till 1752, when they abandoned the Old Style on the 2d of September, and made the succeeding day September 14th, New Style: a change, however, that "was made under very great opposition, and there were violent riots in consequence in different parts of the country, especially at Bristol, where several persons were killed. The cry of the populace was 'Give us back our fortnight,' for they supposed they had been robbed of eleven days."

Triangle, or as the three-cornered nut of the aquatic plant *Cringata*, *Wega* marking its junction with the adjoining *Çravana*.

Hewitt says that in Egypt it was **Ma'at**, the Vulture-star, when it marked the pole,—this was 12000 to 11000 B. C. (!),—and Lockyer, that it was the orientation point of some of the temples at Denderah long antecedent to the time when γ Draconis and α Ursae Majoris were so used,—probably 7000 B. C.,—one of the oldest dates claimed by him in connection with Egyptian temple worship.

Owing to precession, it will be the Polaris of about 11500 years hence, by far the brightest in the whole circle of successive pole-stars, and then $4\frac{1}{2}^\circ$ from the exact point, as it was about 14300 years ago. In 1880 it was $51^\circ 20'$ distant. Professor Lewis Boss and Herr Stumpe place near it the Apex of the Sun's Way.

Picard failed in his efforts to obtain its parallax in the 17th century, but Struve thought that he had succeeded in this by his observations previous to 1840; still much discrepancy exists in the recent determinations. Elkin, in 1892, gave it as $0''.092$; or, to put it in popular language, if the distance from the earth to the sun be regarded as one foot, that from *Wega* would be 158 miles. The 10th-magnitude companion, about $48''$ away, used for some of these determinations, is entirely independent of it, although difficult to be seen owing to the great brilliancy of *Wega*. At least two other still fainter companions also have been found.

This was the first star submitted to the camera, by the daguerreotype process, at the Harvard Observatory on the 17th of July, 1850.

It lies on the western edge of the constellation figure, and, after *Sirius*, is the most prominent of the stars showing spectra of the Sirian type; yet, with all its splendor, affords but $\frac{1}{6}$ of the latter's light. Still it is supposed to be enormously larger than our sun, and proportionately very much hotter. It is moving toward our system at the rate of about $9\frac{1}{2}$ miles a second, and makes "the nearest approach in the northern hemisphere to an independently blue star"; while its flashing brilliancy justifies its being called the **Arc-light** of the sky. Miss Mitchell strangely called it pale yellow.

Wega rises at sunset far toward the north on the 1st of May, and, being visible at some hour of every clear night throughout the year, is an easy and favorite object of observation. It culminates on the 12th of August.

With ϵ and ζ it formed one of the Arabs' several **Athāfiyy**, this one being "of the people," while the others, fainter, in *Aries*, *Draco*, *Musca*, and *Orion*, were "of the astronomers"; for sky objects are often very plain to them that are invisible to the ordinary observer.