lowing stars that some consider it as having decreased since Bayer's day, and perhaps changed in color, for Al Sufi called it red.

 $\beta$ , a ruddy yellow 3d-magnitude star, seems unnamed except in China, where it is **Tso Hea**, the Left-hand Linch-pin; but under this title were included  $\gamma$ ,  $\delta$ , and  $\eta$ .

## γ, 2.3.

Gienah is from Ulug Beg's Al Janāḥ al Ghurab al Aiman, the Right Wing of the Raven, although on modern charts it marks the left. Algorab, given in the Alfonsine Tables to this star, is now usually applied to  $\delta$ .

 $\gamma$  is the brightest member of the constellation, and some Chinese authorities said that it alone marked their 11th sieu. It culminates on the 10th of May.

o, Double, 3.1 and 8.5, pale yellow and purple.

Algorab, the generally received modern title, is from the *Palermo Catalogue*; Proctor has Algores. It is on the right wing, and at the upper left corner of the square. The components are 24" apart; but, owing to its color, the smaller is not readily distinguishable. The position angle is 210°.

All the foregoing stars,  $\varepsilon$  being added, constituted the 11th nakshatra, **Hasta**, the Hand, with Savitar, the Sun, as its presiding divinity;  $\delta$  marking the junction with **Citra**, the next lunar station.

The 11th sieu, **Tchin**, the Cross-piece of a chariot, anciently **Kusam**, contained  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\varepsilon$ ; but, according to some authorities, only  $\gamma$ . This, however, always was the determining star.

ζ, a 6th-magnitude double, almost on the limit of invisibility, strangely seems to have borne a name in China,— Chang Sha, a Long Sand-bank.

Al Birūnī said that with  $\beta$ ,  $\gamma$ , and  $\delta$  it marked the hind quarters of the monstrous early Lion.

. . . the generous Bowl
Of Bacchus flows, and chears the thirsty Pole.

Creech's Manilius.

## Crater, the Cup,

is the French Coupe, the German Becher, and the Italian Tazza, formed by several 4th- and 5th-magnitude stars above the Hydra's back, just westward from Corvus, and 30° south of Denebola, in a partly annular form

opening to the northwest. This was long considered a part of the threefold constellation **Hydra et Corvus et Crater**; but modern astronomers catalogue it separately, Argelander assigning to it 14 stars, and Heis extending the number to 35.

In early Greek days it represented the  $K\acute{a}\nu\theta a\rho o\varsigma$ , or Goblet, of Apollo, but universally was called  $K\rho a\tau\acute{\eta}\rho$ , which in our transliterated title obtained with all Latins, Cicero writing it **Cratera**; while Manilius described it as **gratus Iaccho Crater**, so using the mystic, poetical name often applied to Bacchus. In ancient manuscripts it appears as **Creter**. The Greeks also called it  $K\acute{a}\lambda\pi\eta$ , a Cinerary Urn; ' $A\rho\gamma\epsilon\~io\nu$ , ' $\Upsilon\delta\rho\epsilon\~io\nu$ , and ' $\Upsilon\delta\rho\'ia$ , a Waterbucket.

The Romans additionally knew it as **Urna**, **Calix**, or **Scyphus**, and, poetically, as **Poculum**, the Cup, variously, of Apollo, Bacchus, Hercules, Achilles, Dido, Demophoön, and Medea; its association with this last bringing it into the long list of Argonautic constellations.

Hewitt connected it with the **Soma-cup** of prehistoric India; and Brown with the **Mixing-bowl** in the Euphratean myth of Istar-Kirke, referring to the words of the prophet Jeremiah:

Babylon hath been a golden cup in the Lord's hand.

But any connection here would seem doubtful, although the Jews knew it as Cos, a Cup. Hewitt also identifies it with "the Akkadians' Mummu Tiāmut, the chaos of the sea, the mother of heaven and earth, and the child of Tiāmut, the mother (mut) of living things (tia)"; but all this better suits Corvus.

It was known in England two or three centuries ago as the **Two-handed Pot**; and Smyth tells us of a small ancient vase in the Warwick collection bearing an inscription thus translated:

Wise ancients knew when Crater rose to sight, Nile's fertile deluge had attained its height;

although Egyptian remains thus far show no allusion to the constellation. In early Arabia it was Al Ma'laf, the Stall,—a later title there for the Praesaepe of Cancer; but when the astronomy of the Desert came under Greek influence it was Al Bāṭiyah, the Persian Badiye, and the Al Batinah of Al Achsasi, all signifying an earthen vessel for storing wine. Another title, Al Kās, a Shallow Basin,—Alhas in the Alfonsine lists,—has since been turned into Alker and Elkis; but Scaliger's suggestion of Alkes generally has been adopted, although now applied to the star a. These same Tables Latinized it as Patera, and as Vas, or Vas aquarium.



Riccioli's strange **Elvarad** and **Pharmaz** I cannot trace to their origin. Its more conspicuous stars, with  $\chi$  and others in Hydra, twenty-two in allformed the 10th sieu, **Yh**, **Yih**, or **Yen**, Wings or Flanks; and the whole constellation may have been the Chinese **Heavenly Dog** shot at by **Chang**, the divinity of the 9th sieu in Leo, which also bore that god's name.

Caesius said that Crater represented the **Cup of Joseph** found in Benjamin's sack, or **one of the stone Water-pots of Cana**, or the **Cup of Christ's Passion**; others called it the **Wine-cup of Noah**, but Julius Schiller combined some of its stars with a part of Corvus as the **Ark of the Covenant**.

Astrologically it portended eminence to those born under its influence.

## a, 4.1, orange.

Alkes is our title from Scaliger, but it also has been Alker, and in the Alfonsine Tables Alkes: all from Al Kas of the constellation.

The Latin designation for it — **Fundus vasis**—well describes its position at the base of the Cup.

Since it is the only named star in the figure, and the first lettered, it may have been brighter 300 years ago; but  $\delta$ , a 3.9-magnitude, is now the *lucida*.

a has several optical companions, and culminates on the 20th of April, about  $32^{\circ}$  nearly due south from  $\beta$  Leonis.

 $\beta$ , of 4.4 magnitude, at the southern edge of the base, was one of Al Tizini's **Al Sharāsif**, the Ribs,—*i. e.* of the Hydra,— and the first of the set.

The four that glorify the night!

Ah! how forget when to my ravish'd sight

The Cross shone forth in everlasting light!

Samuel Rogers' The Voyage of Columbus.

## Crur, the Cross,

is the German Kreuz, the Italian Croce, the French Croix and, in the 1776 edition of Flamsteed's Atlas, Croisade. With us it is the Southern Cross.

It was unknown to the ancients by its present title, its four chief stars being noted by Ptolemy as a part of the Centaur, which now surrounds it on three sides. As such Bayer outlined it over the hind feet, lettering it  $\epsilon$ ,  $\zeta$ , v,

1 In this poem Rogers makes the great discoverer bring the telescope into use a century before its invention!