

Binocular Universe: Curving to Corvus

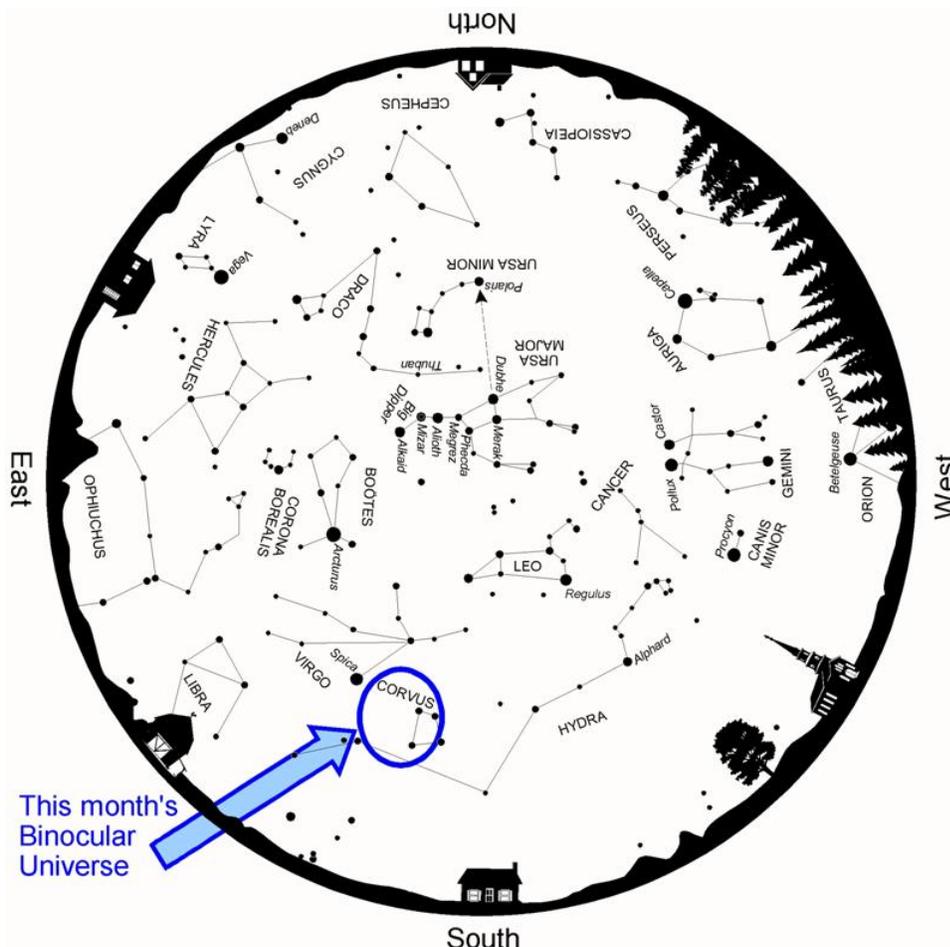
May 2011

[Phil Harrington](#)

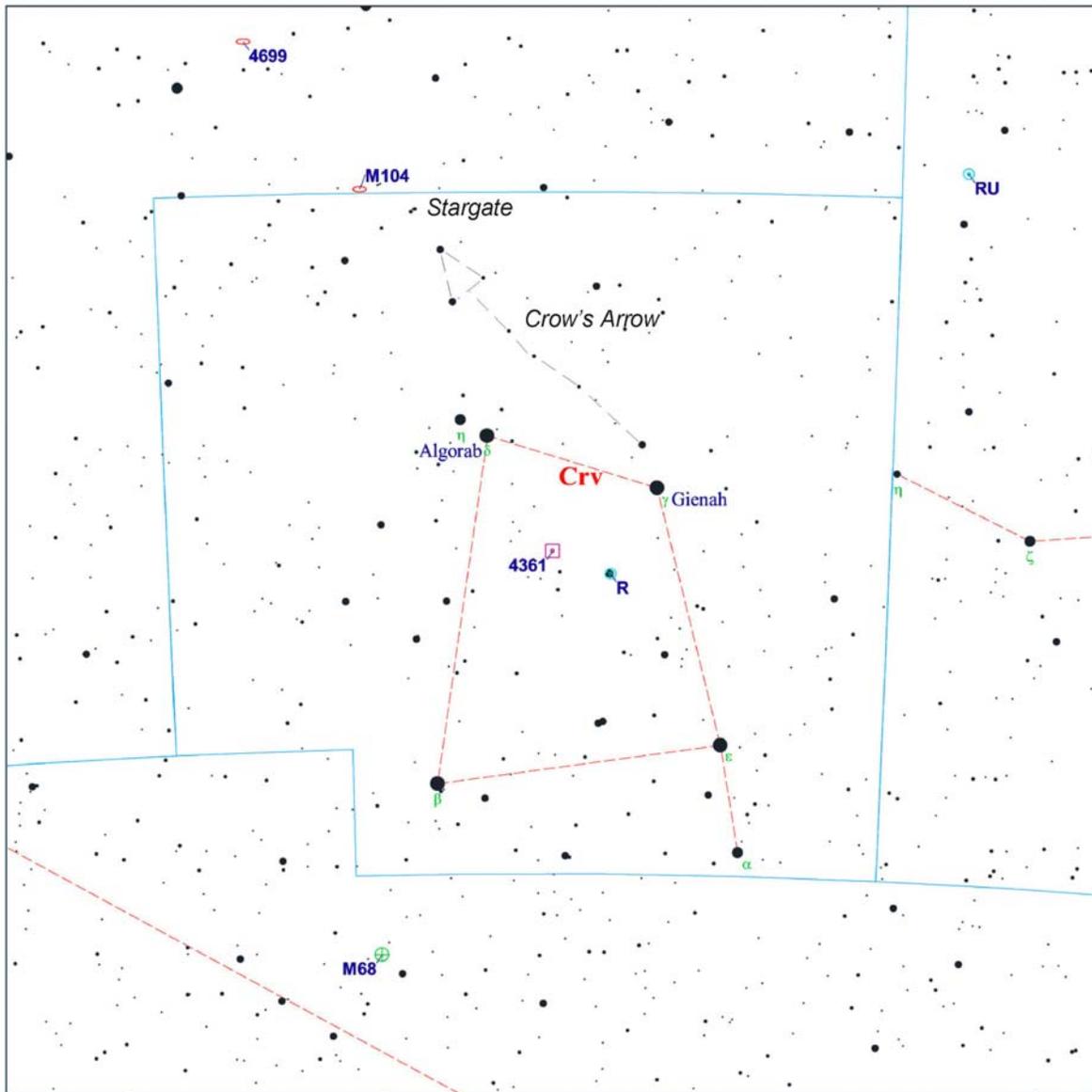


The longest constellation in the entire sky, Hydra the Water-Snake, slithers along the southern horizon during the month of May. Perched on the Snake's back, and making a very odd couple, is the Crow, Corvus. How a Water Snake and a Crow became skyward companions is stuff of legend.

The story goes that Apollo sent the Crow to fetch some water from a stream. Following Apollo's directions, the crow flew off holding a cup in its claws. It was flying along until it saw a fig tree overloaded with unripened fruit. Now ignoring Apollo's wishes, the Crow waited several days for the figs to ripen, and had a feast. Realizing that it was in big trouble, the Crow decided to blame a water-snake for blocking the stream and preventing it from gathering the water. As proof, Corvus flew back to Apollo clutching both the water-snake and the cup. But Apollo didn't



Left: Spring star map, adapted from the author's book, [Star Watch](#).



Touring the Universe Through Binoculars Atlas
RA: 12h 24m, Dec: -18d 48m, FOV: 20d, Mag: 7.5

- | | | | |
|-------------|--------------------|-----------|------------|
| ● ≤ 1.2 | ☉ Galaxy | ♿ Mercury | ♇ Pluto |
| ● 1.2 - 2.4 | ○ Open Cluster | ♃ Venus | ☀ Sun |
| ● 2.4 - 3.6 | ⊕ Globular Cluster | ♂ Mars | ☾ Moon |
| ● 3.6 - 4.9 | ☁ Diffuse Nebula | ♃ Jupiter | ♁ Asteroid |
| ● 4.9 - 6.1 | ☄ Planetary Nebula | ♄ Saturn | ☄ Comet |
| • 6.1 - 7.3 | ⊙ Variable Star | ♅ Uranus | ♁ Unknown |
| • > 7.3 | ☿ Double Star | ♆ Neptune | |

Finder chart for this month's Binocular Universe from TUBA,
www.philharrington.net/tuba.htm

fall for the Crow's tail, and banished it to the sky to ride for eternity on the back of Hydra, just out of reach of the faint constellation Crater the Cup (omitted from the sky map here).

Crater is a tough constellation to see by eye, but the four main stars that make up Corvus stand out surprisingly well even under moderate light pollution. Remember how to find it? From the handle of the Big Dipper, you first *arc to Arcturus*, the zero-magnitude orange jewel in Boötes. Then, you continue to *speed toward Spica*, shining at first magnitude in Virgo. And lastly, you *curve to Corvus*.

The stars that make up the trapezoidal constellation are relatively faint, but are still fun to examine through binoculars. As you hop from one to the next, pause when you get to Gienah (Gamma [γ] Corvi), the northwestern star in the trapezoid. Just north of Gienah, trace out a line of five 6th- and 7th-magnitude stars that extends to the northeast and ends at a small triangle of faint stars. Together, they form the **Crow's Arrow**, an unmistakable arrow-shaped asterism.

The Crow's Arrow points almost directly at a small knot of faint stars. This group of stars is one of those little unexpected treasures that you bump into every once in a while when starhopping. Although the stars are apparently nothing more than a chance alignment, they form an isosceles triangle within another isosceles triangle. The natural symmetry is unmistakable and quite striking through telescopes, but is a little too tight for most binoculars. Instead, binoculars will probably show three points here. Over the course of time, many observers have undoubtedly "discovered" and claimed this little pattern as their own. But to me, Texas amateur John Wagoner gave it its best name when he christened it the **Stargate**.

Scan just to the west-northwest of the Arrow's tip to spot a distant smudge of grayish light. That's the Sombrero Galaxy, **M104**. M104 should just be visible through 50-mm binoculars. My monstrous 25x100 binoculars also hint at the Sombrero's famous dust lane that slices its way across the south side of the galactic core. It's this distinctive rim that gave rise to the Sombrero nickname.

Estimates place M104 at 50 million light years from the Milky Way, which makes it an outer member of the Coma-Virgo Realm of Galaxies. The Coma-Virgo cluster contains over 2,000 galaxies and is centered some 24 degrees north of M104. Like M104, the Milky Way's "Local Group" of galaxies is also on the outer periphery of the Coma-Virgo cluster.

Even though it lies farther from us than other galaxies in the Coma-Virgo cluster, M104 is still one of its brightest members. Despite its vast distance, M104 still shines at 8th magnitude. Its high surface brightness also means that it is an ideal target even from light-polluted observing sites.

But there is more to M104 than just a pretty face. Not only is this galaxy bright at visible wavelengths, it is also quite prominent in the x-ray portion of the electromagnetic spectrum. Astronomers believe that the galaxy's unusually strong x-ray emissions may be the result of a massive black hole buried in the galactic core.



Left: A sketch of M104 and surroundings made by the author through his 10x50 binoculars.

North is up.

To pinpoint our next target, imagine a line between the stars Algorab [Delta (δ) Corvi] and Kraz [Beta (β) Corvi], which mark the eastern side of the Corvus trapezoid. Both are separated by 7° of sky, and make a handy measure for checking the true field size of 7x and 8x binoculars. Extend the line about half the distance farther to the south of Kraz, to a fairly bright field star (fairly bright through binoculars, that is). Look just to its northeast and you should also spot a very dim fuzz ball. That's the globular cluster **M68**.

Admittedly, M68 is not one of spring's finest binocular targets. It's 100,000 or so stars mustered together only shine at 8th magnitude. That's not nearly as impressive as, say, M3 in Canes Venatici. But consider that when the light you're seeing tonight left M68 some 33,000 years ago, state-of-the-art astronomy involved early sky-watchers near Blanchard, France engraving lines on animal bones to keep track of the Moon's phases. A lot has certainly changed since!

Here are some more objects to enjoy within this month's binocular universe that should entertain you on May evenings:

Object	Con	Type	R.A.	Dec	Mag	Size/Sep/ Period	Notes
			(2000)				
R	Crv	Vr	12 19.6	-19 15	6.7-14.4	317.03 days	*TUB page 133* Long Period Variable
4361	Crv	PN	12 24.5	-18 48	10.3p	45"	Giant glasses only
RU	Crt	Vr	11 51.1	-11 12	8.5-9.5p		*TUB page 133* Irregular
M68	Hya	GC	12 39.5	-26 45	8.2	12'	*TUB page 161* NGC 4590
M104	Vir	Gx	12 40	-11 37	8.3	9'x4'	*TUB page 256-257* NGC 4594 Sb Sombrero
4699	Vir	Gx	12 49	-8 40	9.6	4'x3'	Sa

Have a question, a comment, or a suggestion for future columns? I'd love to hear it. Drop me a line at phil@philharrington.net.

Next month's late sunsets make June the perfect time to pay a call on our nearest neighbor, the Moon. Until then, remember that for spring stargazing, two eyes are better than one.



About the Author:

Phil Harrington is the author of nine books on astronomy, including Touring the Universe through Binoculars and Cosmic Challenge. Visit his web site at www.philharrington.net

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