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# Skyguide

2019 - I

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**created by:**

Robert Zebahl

[www.faint-fuzzies.de](http://www.faint-fuzzies.de)

**in cooperation with:**

René Merting

[www.freunde-der-nacht.net](http://www.freunde-der-nacht.net)

# Skyguide - A Short Introduction

The Skyguide should mainly give you some suggestions for own observations and will briefly describe 5 objects annually for every season. It contains easy as well as difficult objects, which are sorted by ascending difficulty. How difficult an object is, depends on several factors, especially quality of sky, aperture of the used telescope and the experience of the observer.

For each object the most important information are given and if applicable a [DSS](#) image (Digitized Sky Survey). In addition you will find a chart, created by the free software [Cartes du Ciel](#) (Skychart), to get an overview of where the object is located. This chart shows stars down to a magnitude of about 8.0 mag. Telrad rings (0.5°, 2°, 4°) on the chart mark the position of the object. But basically I recommend creating your own finder charts. The visual descriptions are mainly based on own observations and only serve as a reference point.



# Corvus - The Crow

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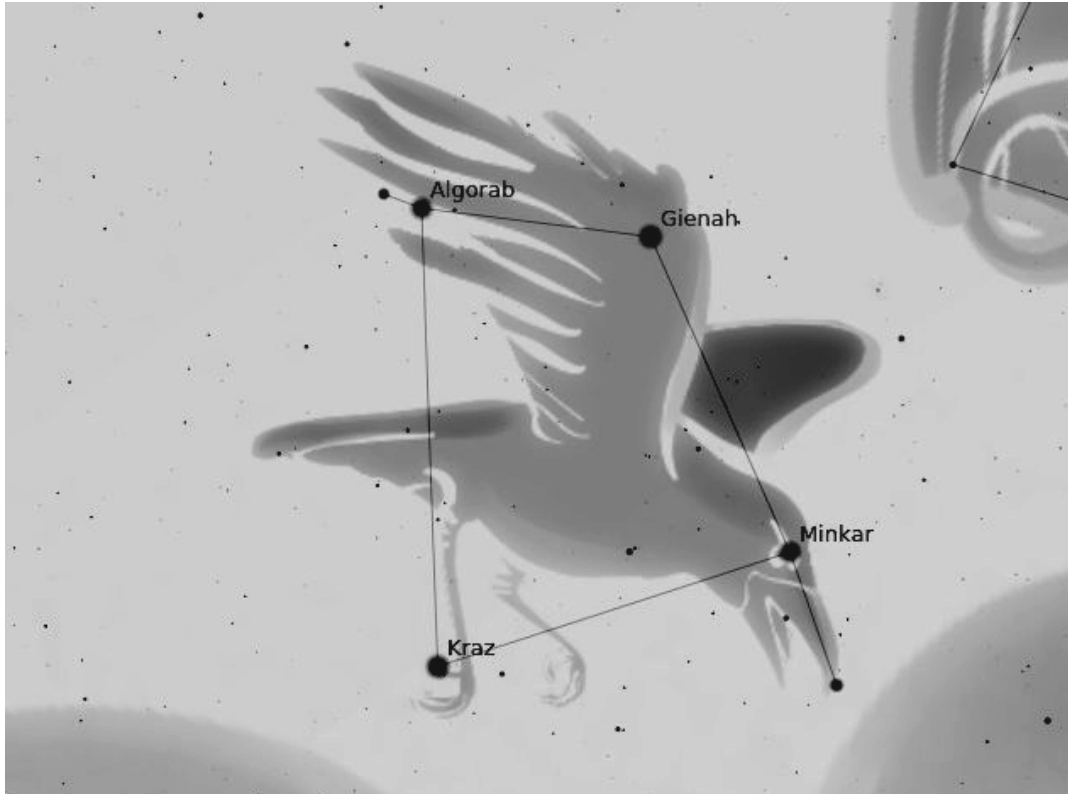


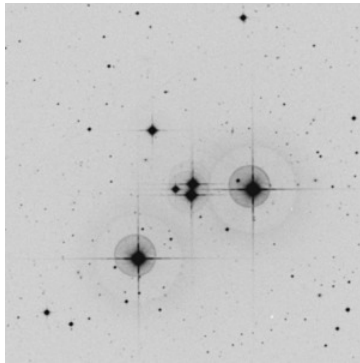
Image Source: Stellarium

The constellation Corvus is a quite small constellation and is located north of Hydra and southeast of the Crater. The four brightest stars form a conspicuous square. But what is the raven doing in the sky? The Greek god Apollon once sent out a raven who was supposed to fetch water from a spring with the cup for an offering to his father Zeus. On his way he discovered a fig tree whose fruits were not yet ripe. But the temptation was great and so the raven stayed for a few days to taste the ripe fruits. Because he was late, he sought an excuse and seized a water snake that was supposed to block his way to the spring. Apollo, however, saw through this lie and banished him out of punishment together with the cup and the water snake to heaven.

<b>Constellation</b>	Crv
<b>Coordinates</b>	12h29m51.86s / -16°30'55.60"
<b>Brightness</b>	2.95 mag / 8.47 mag
<b>Angular Distance</b>	24.6"
<b>Position Angle</b>	213°
<b>Year</b>	2012

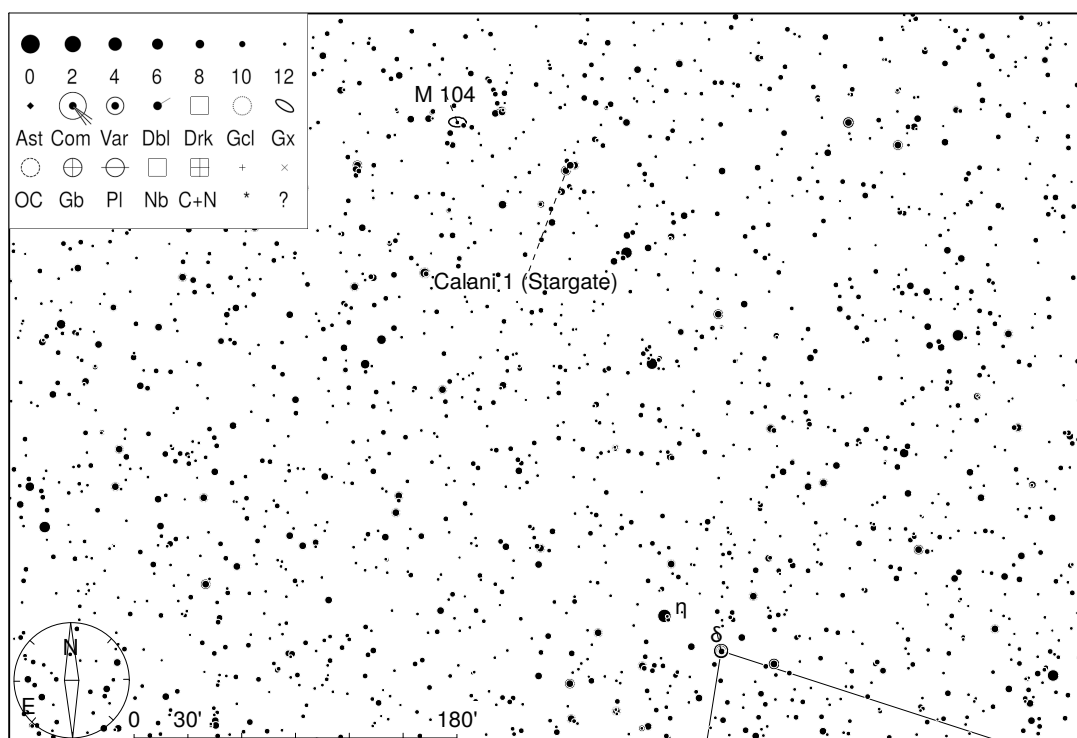
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The double star Algorab forms together with the star Gienah (gamma Crv) the wing of the raven. The angular distance between the two components has not changed since its discovery in 1823. It is thus classified as a 'Common Proper Motion Pair', with both components having a common angular velocity of 0.26 arc seconds per year in a southwesterly direction. Despite the large difference in brightness of more than 4 magnitudes, the double star can already be separated with an aperture of 4 inches at low magnification due to the quite large angular distance. The bright component appears yellowish, the weak companion rather grey, which results in a nice contrast.

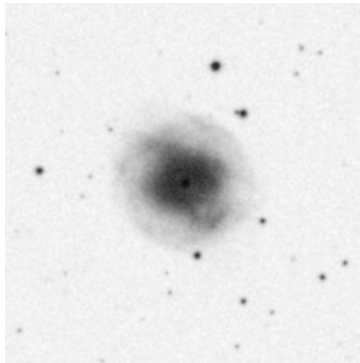


**Constellation** Crv  
**Coordinates** 12h35m45.00s / -12°01'00.00"  
**Size** 8.0×8.0'

DSS II (red) - 15.0×15.0'

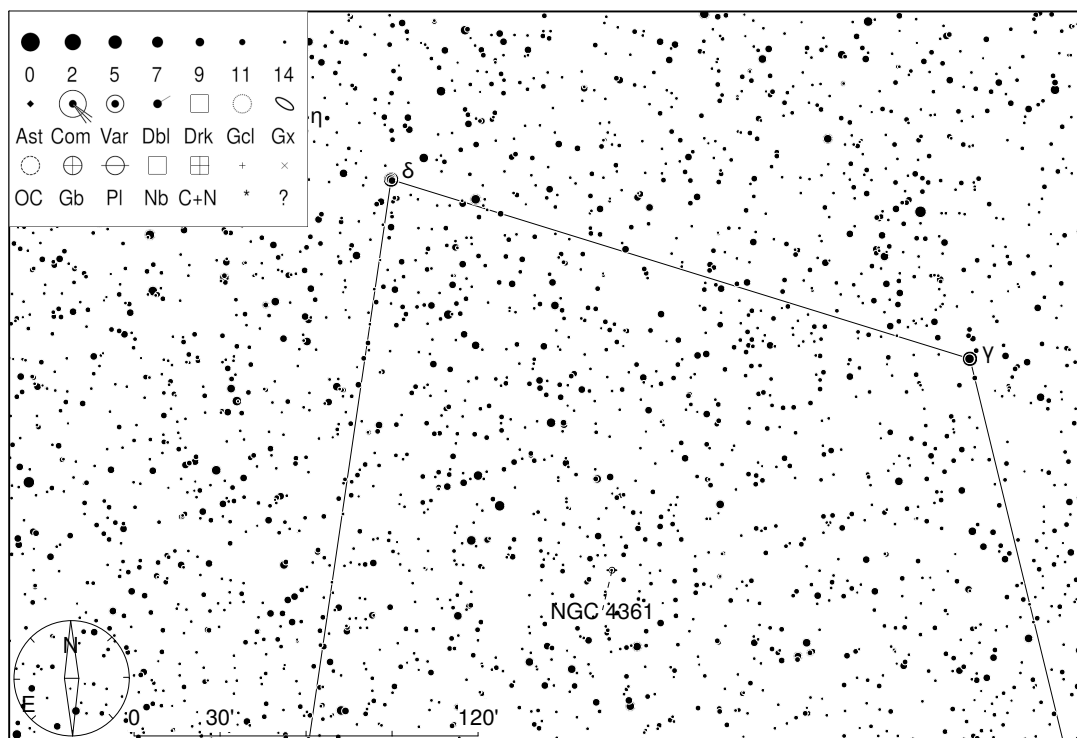


This eye-catching star pattern consists of two triangles, whose stars can also be found as a multiple star system under the designation STF 1659. The name 'Stargate' comes from the science fiction series 'Buck Rogers' in which a portal is described to enable timeless travel to distant places in the universe, which also have such a portal. In the year 1994 a real filming followed under the title 'Stargate'. The name was coined by the Texan John Wagner in the 1980s. The catalogue name Canali 1 goes back to the American Eric G. Canali. However, this star pattern has been known for well over 100 years, as it was already described by Reverend T. Webb in the 1880s.

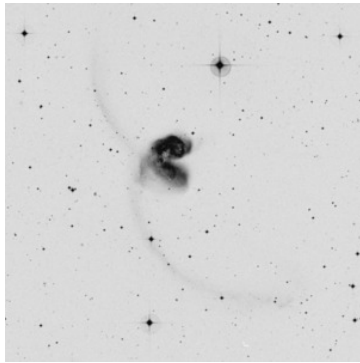


DSS II (red) - 5.0×5.0'

**Constellation** Crv  
**Coordinates** 12h24m30.76s / -18°47'05.40"  
**Brightness** 10.9 mag  
**Size** 2.1×2.1'

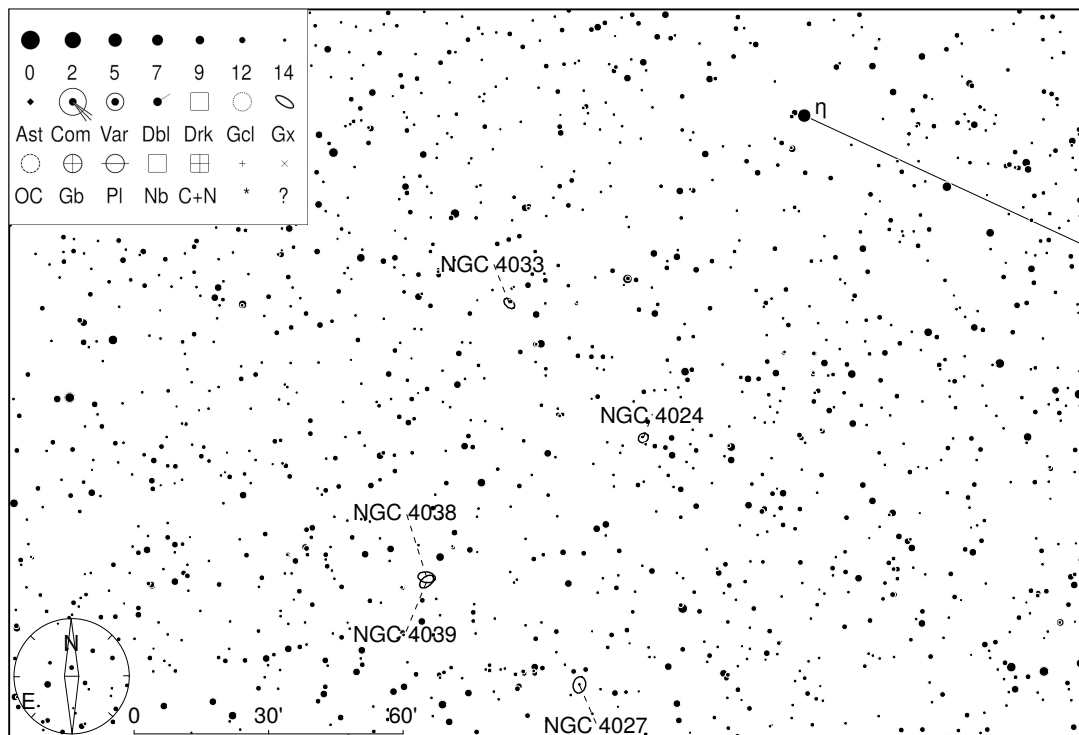


NGC 4361 is the brightest planetary nebula in the middle of the constellation and shows unusual structures. Two curved filaments protrude from the 4500-year-old nebula, giving it the appearance of a spiral galaxy. The gas envelope of NGC 4361 is currently expanding at a speed of 38km/s. Visually, the nebula can already be seen with an aperture of 120mm under urban conditions (Bortle 7), whereas an [OIII] filter is almost mandatory. The nebula appears roundish at 40x magnification, quite faint and a little brighter in the middle. With 8 inch aperture under a rural sky the nebula at 50x magnification reminds of a comet without tail. With 12 inch aperture the 13.0 mag bright central star becomes visible, which is surrounded by a weakly shining, structureless nebula.



DSS I - 20.0×20.0'

**Constellation** Crv  
**Coordinates** 12h01m50.00s / -18°54'00.00"  
**Members** NGC 4038 (10.3 mag, 3.4×2.0')  
 NGC 4039 (10.6 mag, 3.3×1.7')



This pair of galaxies is one of the closest examples of cosmic collisions and perhaps the most beautiful example of extensive tidal trails. Both galaxies have been strongly deformed by tidal forces. The northern arc is about 6' (150,000 light-years) long, the southern arc even 12' (300,000 light-years) long. At the end of the southern arc is the very faint dwarf galaxy NGC 4038S, which may have been formed by tidal forces. The galaxies themselves are already well observable with medium telescope apertures under dark skies. With increasing aperture also the separation is possible. The observation of the tidal tails requires a large aperture and excellent conditions. The American David Tosteson could see at least parts of it with a 25 inch telescope at a 450x magnification.