
Skyguide

2016 - I

created by:

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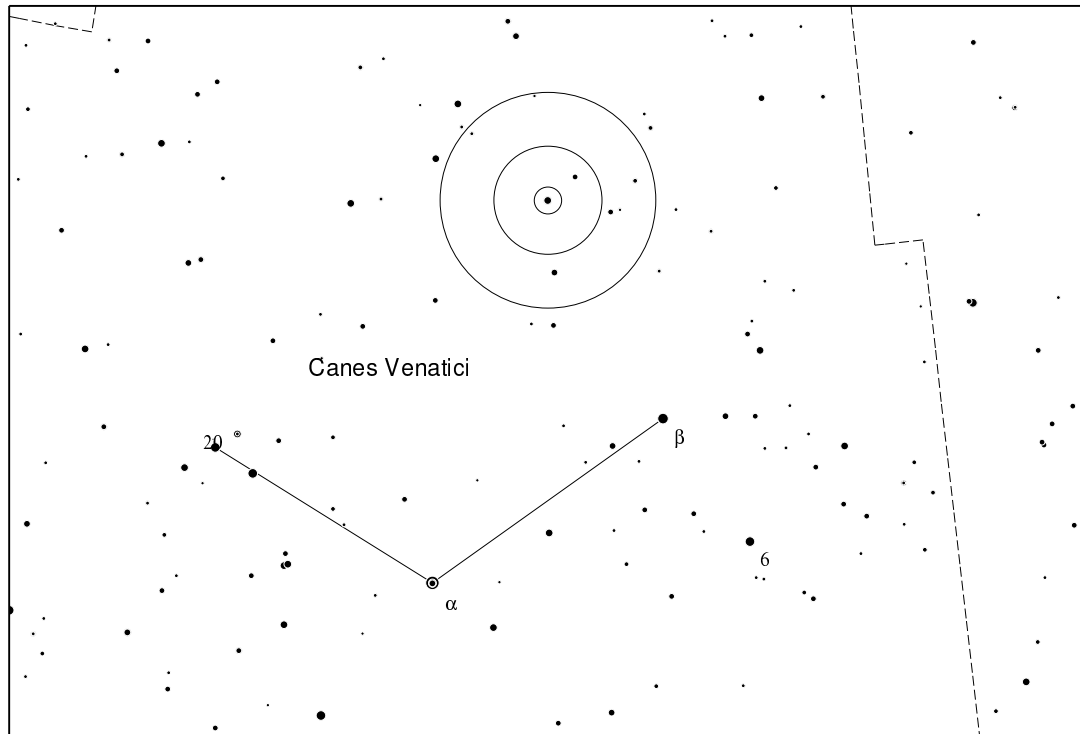
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Skyguide - A Short Introduction

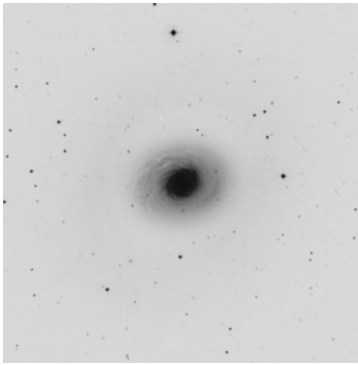
The Skyguide should mainly give you some suggestions for own observations and will briefly describe 5 objects annually for every season. It contains easy as well as difficult objects, which are sorted by ascending difficulty. How difficult an object is, depends on several factors, especially quality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

Constellation	CVn
Coordinates	12h45m07.83s / +45°26'24.90"
Brightness	4.86-5.88 mag
Period	267.8d

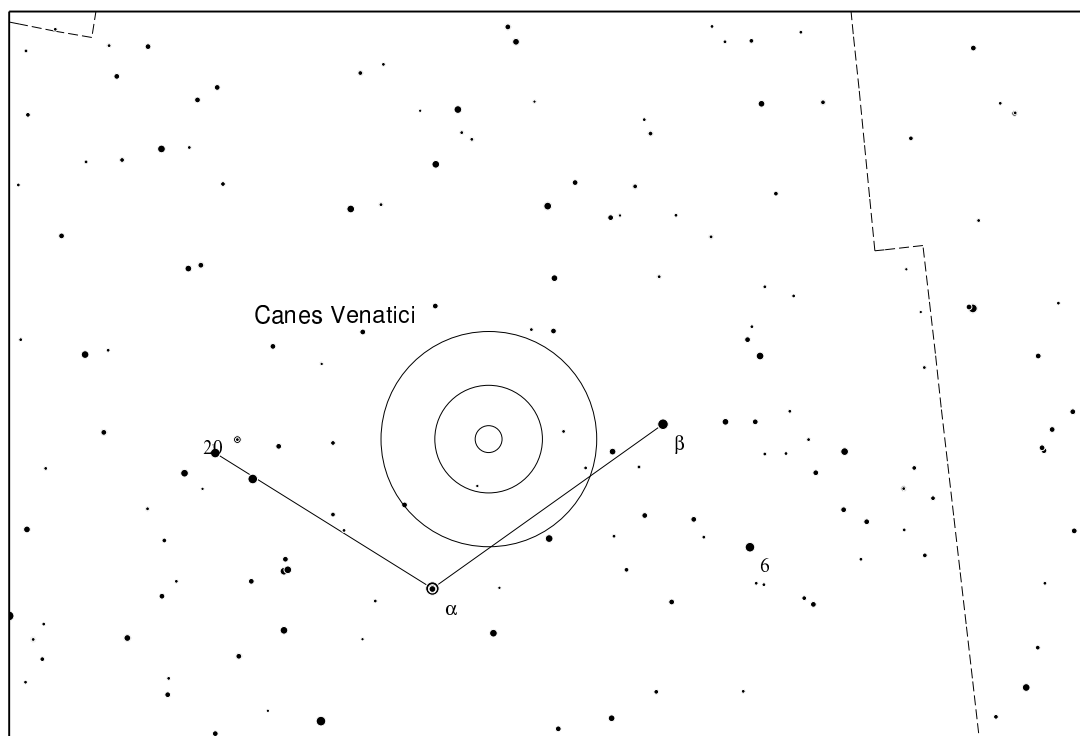


Y CVn is a bright representative of carbon stars and about 1000 light years away. It is a semiregular variable star with a rather small amplitude. Regarding its visual brightness and the period I have found different data. Here I used the data from 'American Association of Variable Star Observers' (www.aavso.org). Another source reported a magnitude range of 4.8-6.3 mag with a period of 160 days. For visual observation this might be not so important. The surname 'La Superba' was given by the Italian astronomer Angelo Secchi due to its striking color. My own observations with 40mm binoculars and an 80mm refractor showed at least an evident orange coloring. Due to its bightness and findability Y CVn is worth a look.

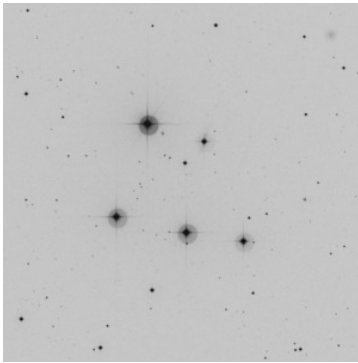


DSS II (blue) - 20.0×20.0'

Constellation	CVn
Coordinates	12h50m53.15s / +41°07'12.60"
Brightness	8.24 mag
Size	11.2×9.1'

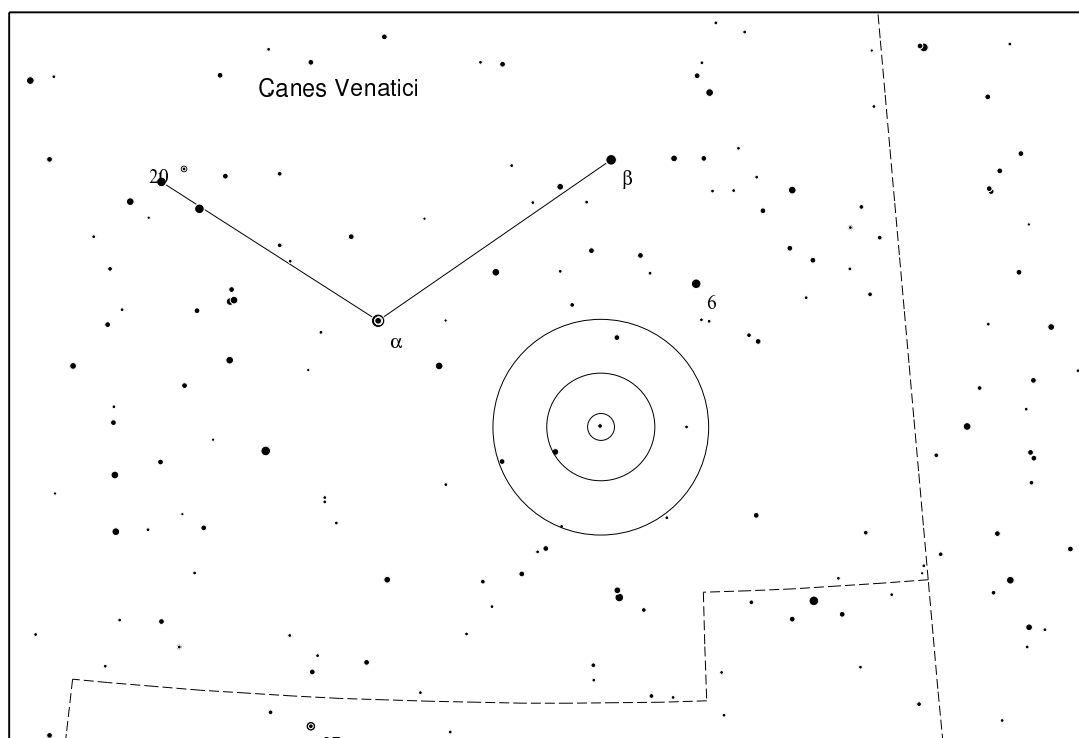


Messier 94 was discovered in 1781 by the French astronomer Pierre Méchain and is one of the brightest galaxies in this constellation. Besides the extremely bright core the galaxy consists of two rings. The inner, much brighter ring is characterized by an extremely high star formation rate, by what Messier 94 is classified as a starburst galaxy. The outer ring in comparison is very faint. This could be also visually well seen. The core area is most evident and could be observed even under urban conditions (Bortle 7, NELM 5.0 mag) with 40mm binoculars. To see the bright inner ring you will need at least a small telescope. With a 4.5 inch Newtonian under suburban skies (Bortle 6, NELM 5.3 mag) the inner ring should be well visible. The outer ring I have never seen and is also quite faint on the DSS image.



Constellation	CVn
Coordinates	12h35m01.00s / +36°22'18.00''
Brightness	6.3 mag
Size	15.0×15.0'

DSS II (blue) - 20.0×20.0'

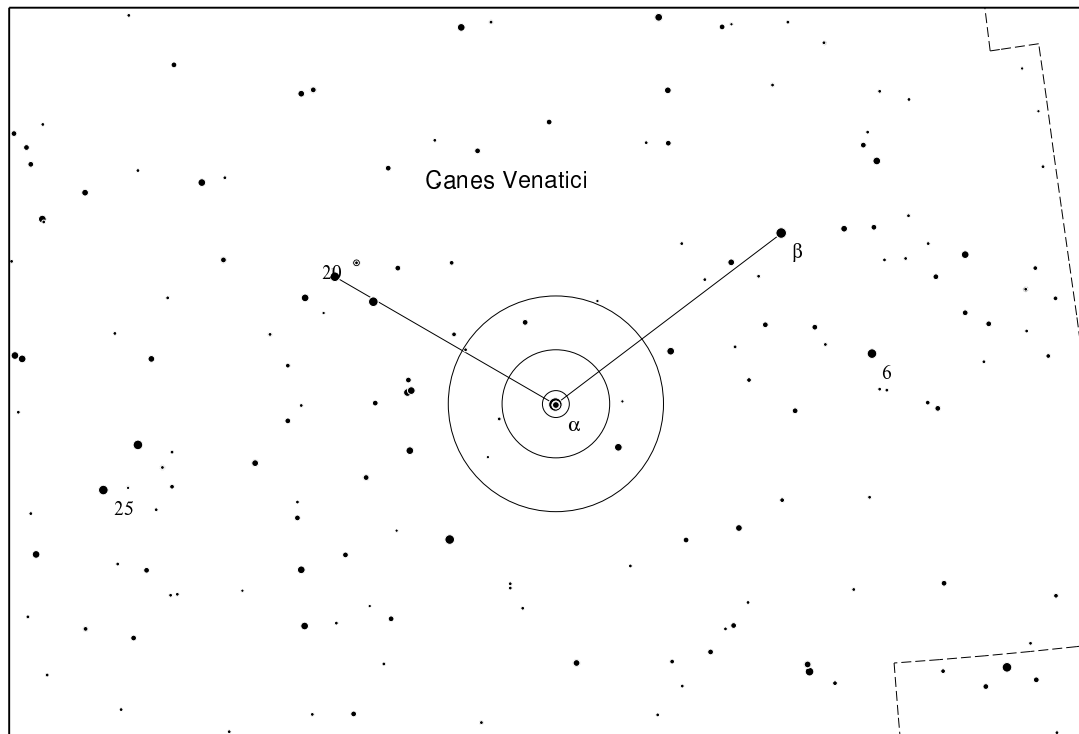


During my selection of objects for this guide I realized, that the constellation Canes Venatici is dominated by galaxies including also some prominent like Messier 51. Finding star clusters is not so easy. Only the globular cluster Messier 3 is a bright one. When browsing the book "The Night Sky Observer's Guide - Volume 2" (by George Robert Kepple and Glen W. Sanner) I surprisingly found this open cluster, which I did not observe until now. I guess it is not a showpiece of cluster and just contains some bright, scattered stars. But its distinctive appearance and also the brightness might make this cluster a bit more interesting - also under less good conditions.

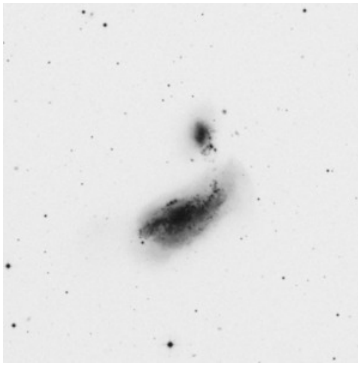
alpha CVn (Cor Caroli, STFA 1692 AB)

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Constellation	CVn
Coordinates	12h56m01.67s / +38°19'06.20"
Brightness	2.85 mag / 5.52 mag
Angular Distance	20.0"
Position Angle	229°
Year	2016

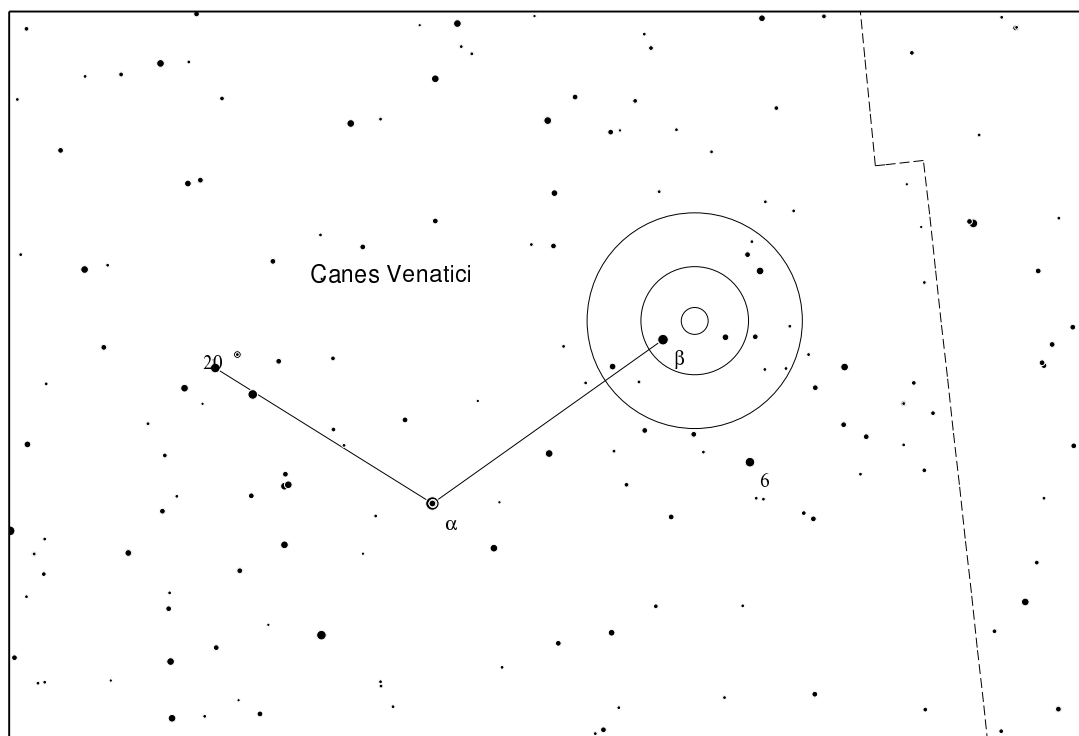


Alpha CVn is the brightest star in CVn and also a double star. The magnitude of the brighter component (alpha 2) varies about 0.1 mag within 5.47 days due to an enormous magnetic field resulting in large starspots. Due to the rather large distance of the components a telescope with small aperture is sufficient to separate. The name 'Cor Caroli' ('Charles's Heart') should remind of the kings Karl I. and Karl II.: After king Karl I. was executed in 1649 and his son Karl II. acceded to the throne again in 1660, Cor Caroli is said to shone very bright. Cor Caroli was formerly the name of a constellation located within the today's officially approved constellation Canes Venatici.



Constellation CVn
Coordinates 12h30m36.00s / +41°40'00.00"
Members NGC 4485 (11.9 mag, 2.4×1.8')
 NGC 4490 (9.8 mag, 6.3×3.1')

DSS II (blue) - 15.0×15.0'



Arp 269 is an interacting pair of galaxies connected by a bridge of visible matter. The bright NGC 4490 is a barred spiral and shows some details in larger telescopes. With an 8 inch Dobsonian I could at least see this galaxy as elongated nebula with much brighter, also elongated center. Due to its high surface brightness you could also try binoculars. The much smaller companion NGC 4485 should be visible under suburban skies (Bortle 6, NELM 5.3 mag) with 4 inch aperture but only appears as small, roundish, evenly bright nebula. A really worthwhile, bright galaxy pair.