

One Good Target

With Some Other Sights Worth Seeing
While You're in the Neighborhood

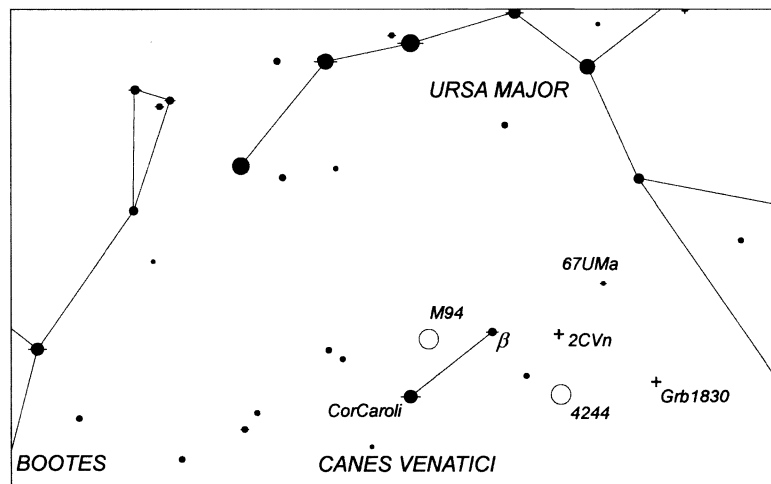
April

Two Galaxies in Canes Venatici (M94 & NGC 4244)
with side trips to a colorful double star
and a nearby subdwarf

Although it covers barely 1% of the sky's total area, the constellation Canes Venatici (The Hunting Dogs) is home to a surprising collection of wonderful stars and deep sky objects, anchored by the constellation's brightest member, a beautiful pair known as **Cor Caroli** (The Heart of Charles, so-named in honor of England's King Charles I). We visited Cor Caroli in May 2022, but it's well worth another look: one of the sky's most famous doubles, it comprises a blue-white mag 2.9 primary 19 arcseconds SW of an ambiguously-colored mag 5.5 secondary.

Cor Caroli is our jumping-off point this month as we set out in search of our primary target, a delicate face-on spiral galaxy cataloged as **M94** in the list of comet-like objects compiled by Charles Messier from 1774-1781. You'll need reasonably dark skies to see this galaxy. It measures 5 x 3.5 arcminutes and glows at an integrated magnitude of 8.9, but its low surface brightness can make it a difficult target to recognize. In large binoculars it's just a patch of haze, but small scopes begin to show a brighter center. Medium-sized scopes (6" to 8") show a shimmering, slightly oval halo with hints of spiral structure and a bright well-defined core – an appearance that earned it the nickname *The Cat's Eye Galaxy* (or more menacingly, *The Crocodile's Eye*). The bright center is surrounded by two separate rings of active star-forming regions that can be glimpsed in larger scopes. Hubble images show the active rings chockablock with hot young blue stars, and the area between the two rings populated by older, more sedate yellow suns. The galaxy's light comes from roughly 40 billion stars, and the photons that bring it to us travel 16 million years before reaching our eyes.

**This month's targets
showing stars to mag 5.25**



To find M94, put Cor Caroli in your finder to make an acute triangle with it and a pair of mag 6 stars as shown below. The galaxy will be at the opposite side of a 5° finder field from a mag 5.9 star, and at about the same

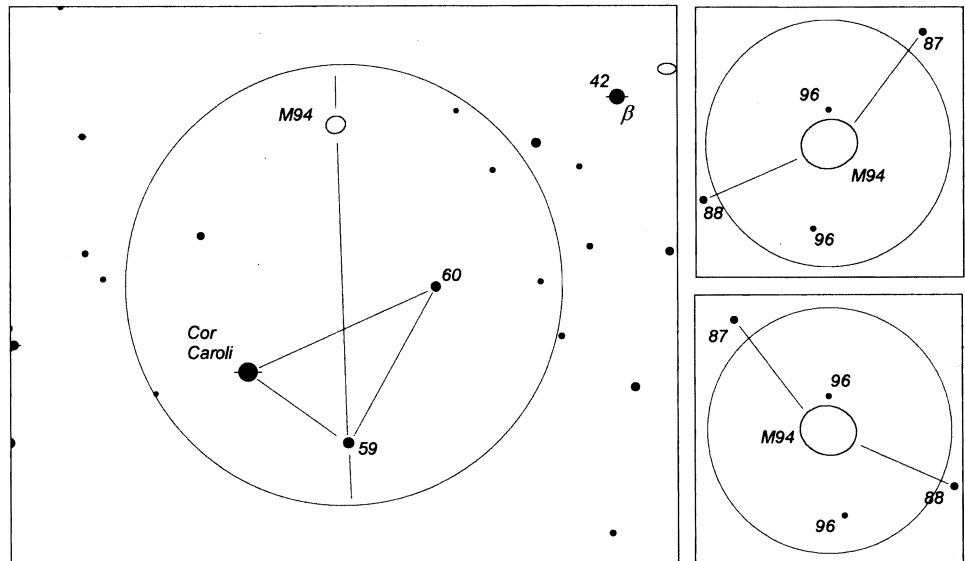
distance in from the edge of the field. In the eyepiece, the galaxy is framed by mag 9 stars as shown in the 1° views. Start around 50x and increase the magnification as your sky conditions permit.

Finding M94

(Left) 5° field, stars to mag 8.0

(Right) 1° field, stars to mag 10:
erect image (top),
mirror-reversed (bottom)

(All) North at top,
selected magnitudes noted,
decimals omitted



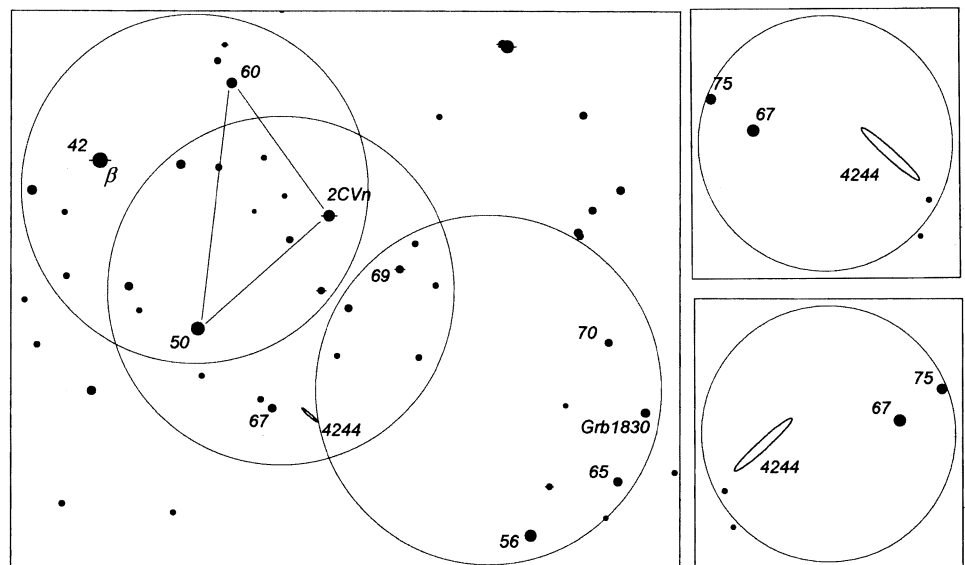
While M94 shows us an almost-fully face-on view, our next target, **NGC 4244**, is edge-on and elongated – only 5° from perfectly flat – leading some to call it *The Silver Needle Galaxy*. It's 13 million light years from us and shines at integrated magnitude 10.2 spread over an area 13 x 1 arcminutes in size. To find it, start at mag 4.2 star Chara (Beta [β] CVn), orient your finder by the mag 5-6 triangle shown in the 5° view below, then pan slowly SW until the line from 2 CVn to the mag 5.0 star is past the midpoint of the field. Use the mag 6.7 star as your aiming point, and the galaxy will be visible as shown in the 1° eyepiece views below. It's a narrow streak of light in small scopes, showing a brighter center in 6"+ instruments. Try 100x to 150x for a good view.

Finding NGC 4244

(Left) 5° field, stars to mag 8.0

(Right) 1° field, stars to mag 10:
erect image (top),
mirror-reversed (bottom)

(All) North at top,
selected magnitudes noted,
decimals omitted



While you're in the neighborhood, take a closer look at **2 CVn**. Bump the magnification up to 60-75x and you'll find that it's a pretty double, with a reddish-gold mag 5.8 primary 11 arcseconds away from a blue mag 8.1 secondary. And before you pack up for the night, pan one more finder field to the SW until you reach a short arc of three mag 5-6 stars, as shown in the 5° view above. The northernmost star in the arc is **Groombridge 1830**, a mag 6.5 yellow-white subdwarf, half as large and a fifth as bright as our Sun. It has the third-highest proper motion of any known star (after Barnard's Star and Kapteyn's Star), despite the fact that it is considerably farther from the Sun than either of them – 30 light years for Grb 1830 vs 13 for Kapteyn's and only 6 for Barnard's. It's an interesting star to contemplate as we wind up an evening's romp with The Hunting Dogs.