

# One Good Target

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

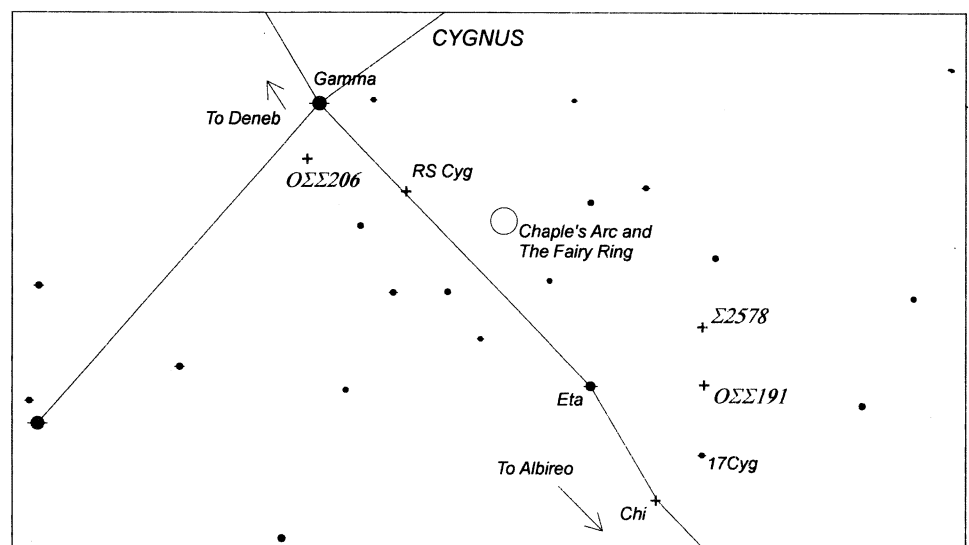
September

A Remarkable Group of Doubles in Cygnus:  
Chaple's Arc and The Fairy Ring  
with side trips to some other doubles and a couple red stars

Visual astronomers always get excited when we find a “double double” pair – two similar double stars visible in the same eyepiece field. But one night in 1972, observer Glenn Chaple – who later wrote the “Observing Basics” column in *Astronomy* magazine – was star-hopping in Cygnus (The Swan) with his 3” scope, hunting down **h1470**, a gorgeous pair that mates a yellow-red mag 7.3 primary with a mag 9.4 blue-green companion 29” away. When he arrived where he expected the pair to be, he was startled to see not just one, but four apparent double stars in the same field, forming a graceful half-degree curve that came to be known as **Chaple's Arc**. And it didn't stop there: in the 1990s, Utah amateur Kim Hyatt also ventured into this area while looking for h1470, and saw not just an arc of doubles but a complete circle of similar-looking pairs that he dubbed **The Fairy Ring**. Mid-sized scopes show six pairs in the ring – the brightest, and the only one that's not an optical double, is h1470. North Carolina observer Roger Ivester saw at least eight pairs (and sketched an even dozen) when he observed the ring through his 10” scope in 2015. What's even more remarkable is that each of the doubles is oriented so it points roughly towards the center of the circle, as if each pair were a cylinder on an old-time radial airplane engine!

To find this delightful target, put mag 3.9 Eta ( $\eta$ ) Cygni near one edge of a 5° finderscope field as shown on the next page, then find the trio of mag 5 stars across the field arranged like clock hands. Imagine them as forming three sides of an equilateral parallelogram, and look for a mag 6.2 star where the fourth corner would be. Put

***This month's targets,  
showing stars to mag 5.5  
(North at top)***



that star in a 1° low-power eyepiece field, and the Fairy Ring will be in view, centered 20' SW of the mag 6.2 star. The six pairs visible in medium (4"-6") scopes are shown on the half-degree eyepiece view below.

### The Fairy Ring

**(L) Finderscope view:**

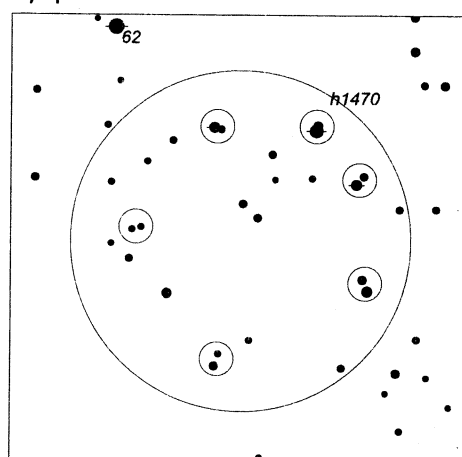
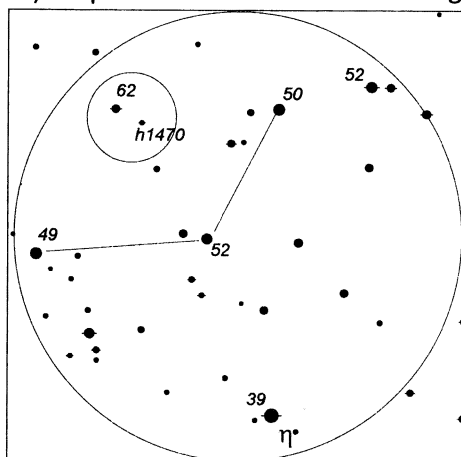
**5° field, stars to mag 7.5**

**(R) Eyepiece view:**

**½° field, stars to mag 11**

**(Both) North at top,**

**selected magnitudes noted,  
decimals omitted**



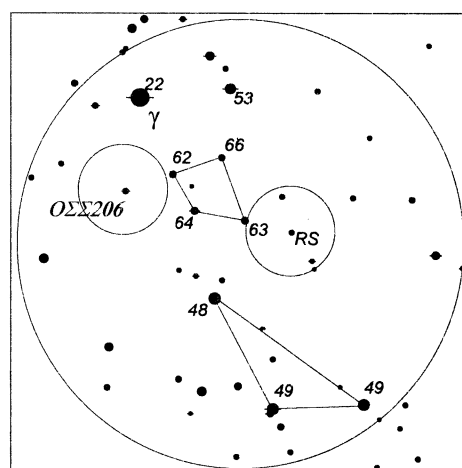
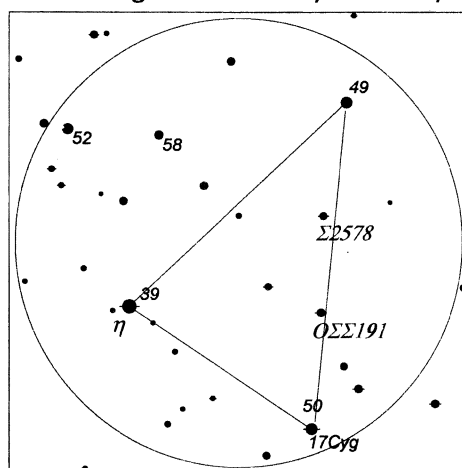
While you're in the neighborhood, put Eta (η) Cyg in your finder again, but this time look for the mag 5 stars that form a large triangle extending west from Eta, as shown below. The star at the SW point of the triangle, **17 Cygni**, is a yellow and blue pair in a beautiful field, a mag 5.0 primary with a mag 9.2 secondary 26" away. Two other doubles lie along the line from 17 Cyg to the triangle's N point. **Struve (Σ) 2578** consists of a mag 6.4 yellow primary 15" away from a mag 7.2 companion that many observers see as slightly greenish. The other double along that line is **OΣΣ 191** (from the Supplement to Otto Struve's 1843 double star catalog). It pairs a deep yellow mag 6.2 primary with a blue mag 9.2 secondary 38" away.

**Finderscope views:**

**5° field, stars to mag 7.5**

**North at top,**

**selected magnitudes noted,  
decimals omitted**



Before packing up for the night, check along the neck of The Swan 2½° SW of Eta to see if pulsating variable **Chi (χ) Cygni** is bright enough to pick out. It exhibits an unusual S spectrum, midway between a red giant and a carbon star, and ranges from a bright mag 3.3 to an almost-undetectable mag 14.2 over its 407 day period. When it's visible, its intense red color jumps out against the underlying star cloud. But if it's in its shy stage, don't despair: pan back along The Swan's neck to mag 2.2 Gamma (γ) Cyg, where the neck and the wings meet. Find the lopsided mag 6 diamond midway between two relatively bright stars (mag 5.3 and 4.8) and use the diamond to point you towards our final pair of targets. First is another Otto Struve double, **OΣΣ 206**, a blue and yellow pair with a mag 6.7 primary 43" from its mag 9.2 companion. On the other side of the diamond, nestled up just south of a mag 7.2 star, is a C spectrum carbon star known as **RS Cygni**, whose brightness ranges from mag 6.5 to 9.5 over a 417 day period. It's also a wide color-contrast multiple, whose red tint complements the mag 7.2 blue supergiant 2¼ arcminutes to its north, and a yellow mag 9.5 star 2½ arcminutes east – covering all three primary colors, and giving us a fitting spot to end our evening chasing treasures in the celestial Swan.

*Rick Gering / September 2025*