CASSIOPEIA, THE QUEEN

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> Cassiopeia, one of the two bright circumpolar constellations, is named from a queen of Grecian mythology; also sometimes known by the name of The Lady in her Chair. During November it is on the meridian, directly above the pole and opposite the Dipper, about nine o'clock. The constellation is very easily recognized by five bright stars arranged in a zigzag figure like a wide inverted W, which in certain positions is said to resemble the outline of a chair. Lying as it does, in the galaxy, it contains many fine telescopic fields.
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> —excerpt from "The Constellations"
> *The Observers Handbook* 1912

Cassiopeia's (Cas) familiar "W" pattern makes this constellation among the most recognizable asterisms and it quickly becomes a key signpost for navigating the night sky. While no star in Cassiopeia made the cut for the *Observers Handbook* (OH) *50 Brightest Stars*, there are 157 stars brighter than mag. +6.5. Running through the "W" of Cassiopeia is the Milky Way, rich in objects for small telescopes and binoculars.

On the eastern side is +4.6-mag. triple star, ι Cas, one of the prettiest in the sky, a white (A) primary accompanied by (B) yellow and (C) blue stars. Component A is also a CVn-type variable, which is orbited every 840 years by +6.9-mag. component B. At a dark site, pull your eye away from the telescope and gaze mid-way between ι and ε Cas, the cluster Stock 5 combines with a group of faint stars to form a little cloud off the main band of Milky Way. Travel about 3° northwest to *Deep-Sky Challenge Object* NGC 609, this small 11th-mag. cluster makes a great gateway object for exploring the Challenge Objects list. Drop 1.5° south of a line between ε and δ Cas and you'll have NGC 663 in the centre of your eyepiece. Under dark skies, the grainy 8th- and 9th-mag. stars of this cluster will resolve into delicate pinpoints of light. Another 1.5 degrees west will centre M103. The 1937 OH saw the first instance of *Messier's List of Nebulae and Star Clusters*, and at that time M103 was the last object!

Webb notes this fan-shaped cluster contains the double star Struve (Σ) 131 as well as a red star. Another red star is WZ Cas, a 7th-mag. pulsating-variable carbon star on the western flank of the "W," while an 8th-mag. secondary appears 58″ to the southeast. See pp. 291–303 for more on Doubles, Variables, and Coloured Stars. Two degrees southwest of δ Cas is NGC 457, always a popular object for public observing because of the bright creature-shaped appearance of this 6.4-mag. open cluster, also known as the "Owl," "ET," and "Skydiver" cluster. Travel 2° southwest of α Cas and NGC 281, the "Pacman Nebula" will be centred in your eyepiece. Discovered in 1883 by E.E. Barnard, who described it as "a large faint nebula, very diffuse," a filter will bring out the classic shape in even the smallest telescopes. Collinder 463 is also off the beaten path, a nearly 1° object found by moving about 8° toward Polaris from ι Cas.

Halfway along a line running from κ Cas to δ Cep we find open cluster M52. Fainter than 7th mag. makes this nebulous haze of 200 stars (according to Rosse) better suited for telescopic powers. Look for the triangle shape and an orange star Webb wrote about. About 0.5° to the southwest is NGC 7635, the Bubble Nebula, a planetary nebula appearing as a faint oval surrounding a mag. 8 star, additional nebulosity may be visible when using a filter under dark skies. Nearby IC 59, the γ Cas nebula, was also discovered by Barnard, but you'll need exceptional skies to see this Challenge Object.

Stock 2 may not be as familiar to observers as other open clusters, but proximity to the famous Double-Cluster, a leisurely 2° meander up a star chain, bright mag. -4 appearance and large 1° size should place it on everyone's second-look list. Wide-field telescopes can fit all three clusters within the same field, and those with such large fields should sweep a few degrees northeast and attempt to pick out the Heart & Soul nebulae region, including IC 1795 and IC 1805 and 1848. The complex of clusters and nebulosity is easily visible in a 5-inch telescope, even without a filter. For more challenging objects, aim your scope a few degrees further south for Maffei 1, a massive elliptical galaxy heavily obscured by the Milky Way. Perhaps less challenging is the planetary IC 289 to the north of the complex. Easier galaxies exist in Cassiopeia, such as NGC 185, a dwarf galaxy just over halfway to M31 from α Cas. Last but not least, take a look 3° off β Cas on the western side of Cassiopeia. Mark Bratton, author of the *Herschel Objects*, pointed out the dark lanes of NGC 7789 creating the flower-petal appearance that has mesmerized my small band of observers ever since.

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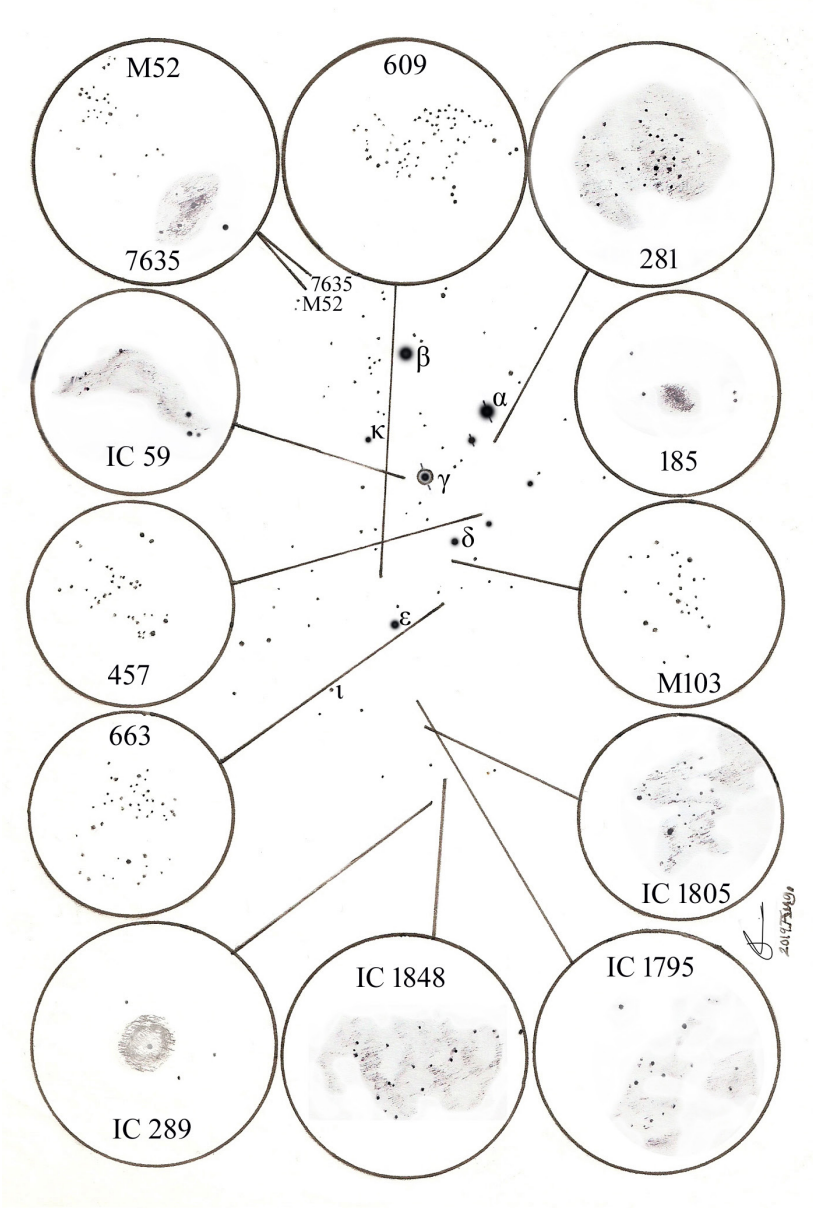

Diagram by Randall Rosenfeld