

ORION

BY CHRIS BECKETT & RANDALL ROSENFELD

*“You know Orion always comes up sideways.
 Throwing a leg up over our fence of mountains,
 And rising on his hands, he looks in on me
 Busy outdoors by lantern-light with something
 I should have done by daylight, and indeed,
 After the ground is frozen, I should have done
 Before it froze, and a gust flings a handful
 Of waste leaves at my smoky lantern chimney
 To make fun of my way of doing things,
 Or else fun of Orion’s having caught me....” —Robert Frost*

Orion’s stick figure of stars is ideal for aiding observers locating their targets on cold winter nights.

His head is marked by the double star Lambda Orionis. While three stars are easily visible to the unaided eye, more appear in binoculars forming the cluster Col 69. Surrounding the cluster, and visible using small instruments with large fields and an H β filter, you might glimpse the ghostly nebulosity of the Angelfish Nebula, the brightest component of the Lambda Orionis ring. Slowly scan southeast and with eyepieces of higher powers to locate the Finest NGC 2022, a planetary nebula.

Work your way up Orion’s arm starting with Betelgeuse, Alpha Orionis, an orange variable star that dimmed dramatically late in 2019. If Betelgeuse replaced our Sun it would engulf the inner Solar System out to the asteroid belt. Moving northeast, place your telescope on Mu Orionis and try to detect a nearby planetary nebula, Abell 12, which benefits from an occulting bar. Continue up the arm to 73 Orionis and use a low power to scan 0.5° southeast to the open cluster NGC 2194, a fairly rich cluster of 80 stars; look for the naked-eye “37” open cluster NGC 2169 nearby. Find NGC 2174, the Monkey Head Nebula, where Orion’s hand would be—a UHC or OIII filter and an exit pupil of ~5 mm will reveal the most detail.

Orion’s Belt is unmistakable as no other bright stars form such a triad. As you gaze through your binoculars, know that many of the stars in the field belong to an open cluster and an OB1 association. Try to see the “S” pattern between Alnilam and Mintaka. Alnilam is the middle star in the belt and the 11th-closest star to our Sun. To the southeast is Alnitak, Zeta Orionis, and here we can glimpse part of the Orion B cloud stretching from just north of Alnitak in the series of small bright nebulae surrounding M78, to the emission nebula NGC 2024, laying just a few arcminutes east of Zeta. This Tank Track Nebula is well visible in 7 \times 50 binoculars from a dark site. Move south of Zeta, and on clear nights try for NGC 2023, a white faint puff surrounding a star. Nearby to the west is a real challenge, IC 434, which responds well to an H β filter and may reveal the Horsehead Nebula, B33, which was discovered by Williamina Fleming on the first glass plates of the region. Blake Nancarrow pointed out that just west of the Horsehead Nebula is Sigma Orionis, which splits into a spectacular multiple-star system that resembles a narrow dart. Arcing around the belt is the massive Barnard’s Loop, which has a reputation as a difficult target. However, a good finder modified to take a 50-mm eyepiece and an H β filter reveal the beauty of this giant gas filament under moderately dark skies.

Orion’s Sword is the first target for many observers on clear winter nights. The interplay between bright M42 and ghostly M43 shows best when viewed under moderate magnification while backing off the power to reveal the entire sword in one low-power view. North of M43, hunt down NGC 1973, the central component of a group of bright emission and reflection nebulae. For those looking for a real challenge, head south to a gem of a target, NGC 1999 and the nearby Herbig-Haro 1 & 2—dust and bright ionized gas surrounding newborn stars.

West of Mintaka find Briceno 1, a loose scattering of stars best viewed in binoculars. South of this cluster is a beautiful emission nebula, NGC 1788, sharply defined along its edge by the dark nebula Lynds 1616.

Lastly is Rigel, Beta Orionis, a brilliant, blue, supergiant variable star, which despite its Bayer designation, is usually the brightest star in Orion. If the skies are particularly clear and transparent, meander into Eridanus using a wide-field refractor and try to detect IC 2118, the Witch Head reflection nebula.

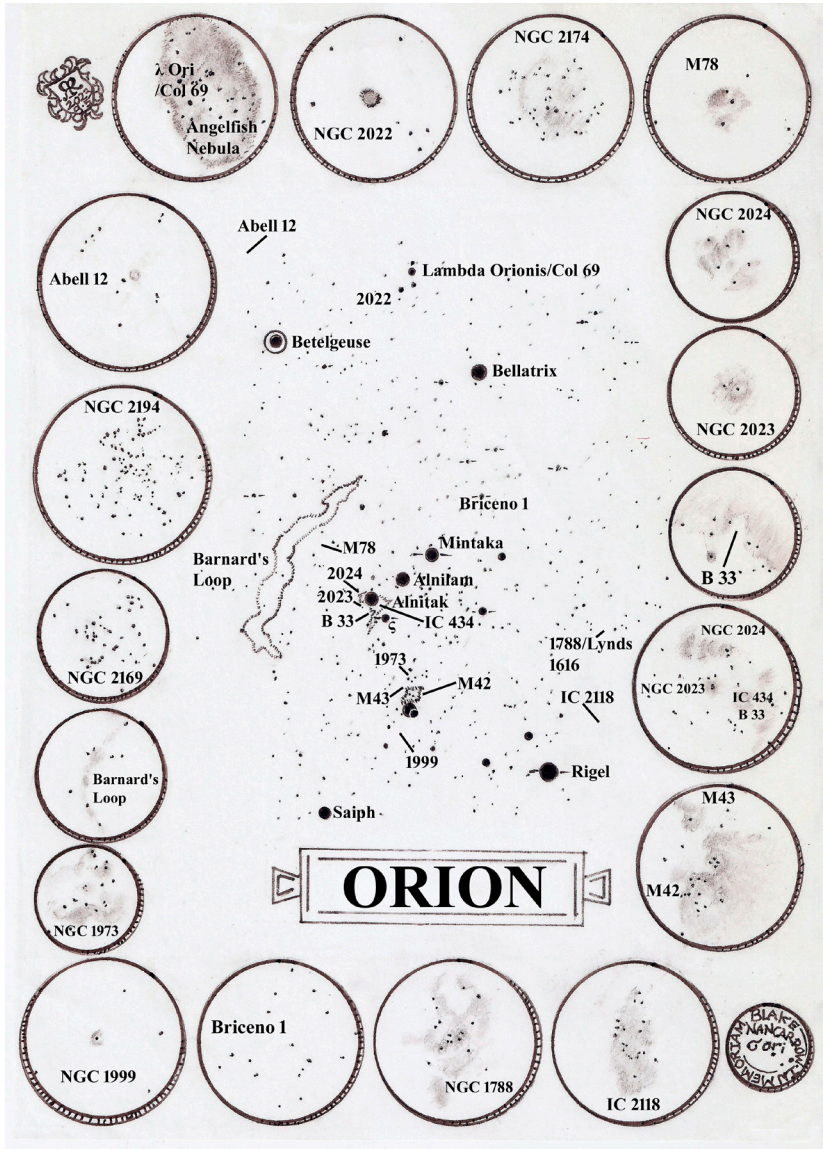


Diagram by Randall Rosenfeld

Editor's Note: We have included a small tribute to a recently passed Society member, Blake Nancarrow, who died suddenly on 2023 Sep. 1, after a long bout with cancer.