

## SCORPIUS, THE SCORPION

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Scorpius is best observed in the early morning hours of northern spring (southern autumn). Most observers in Canada must do with a partial tail, as the entire constellation only fully clears the horizon south of 45° latitude. Even then, with 14 of the 288 brightest stars in the sky, many double stars, and a wonderful variety of nebulae and star clusters, it is worth exploring.

Orange-red Antares,  $\alpha$  Sco, “the rival of Mars,” is a double star with a 5.5-mag. companion. The challenge is splitting the emerald-green star separated by 2.9" from the 370-times brighter Antares! Aim your lowest-power eyepiece at Antares, and slowly move 1.5° east to M4. Small telescopes can begin to resolve M4, perhaps the nearest globular to Earth. Look for the central bar of stars before panning your telescope 1° northeast to tease out a ghost of a globular, NGC 6144. When it's easily visible, the sky is adequate for hunting down LBN 1103, a large faint nebula extending 3°×4° southeast of Antares.

About halfway on a line from Antares to Graffias ( $\beta$  Sco) is M80, a bright 7th-mag. globular cluster, with a concentrated core requiring a large aperture for resolution. North,  $\beta$  Sco is a colourful blue-white double with a separation of 14" making it an easy split. Look 1.5° northeast to  $\nu$  Sco, a seven-star system. Then find IC 4592, the challenging “Blue Horsehead” reflection nebula illuminated by  $\nu$  Sco, and part of a large molecular-cloud complex which includes the dark nebula B 40. Keeping on our north trajectory lands us at  $\zeta$  Sco, and then nearby  $\eta$  Sco, a 5th-mag. multiple-star system.

Head south down the tail of Scorpius to SU Sco, an 8th-mag. variable carbon star about 2/3rds of the way from  $\tau$  to  $\epsilon$  Sco. While in this area, go about 4° east to V1280 Sco, a recurrent Nova candidate.

In the far south, the tail makes a sharp turn to the east at  $\zeta$  Sco. Just above this set of three stars, between  $\zeta$  and  $\mu$ , is NGC 6231, the “False Comet,” a 2.6-mag. open cluster visible to the unaided eye. Small binoculars break the area into beautiful star chains, and on a really good night even a 60-mm telescope with a UHC filter reveals IC 4628, the “Prawn Nebula,” to the northeast. Pan to the 1.9-mag. horizon-hugging Sargas, a double star with a 5th-mag. secondary separated by 6.5".

The Cepheid variable Shaula ( $\lambda$  Sco) marks the stinger, which with  $\nu$  Sco has been likened to blazing “Cat’s Eyes.” 5° northeast of  $\lambda$  Sco to M7 is a bright open cluster known as Ptolemy’s Cluster after the observer who wrote in his 150 CE *Almagest*, “nebulous star following the stinger.” M7 appears to sit on the edge of a large starcloud, NGC 6455, extending southwest over 1°. One of the most dense star fields of the Milky Way, John Herschel described it as “A very extensive nebulous clustering mass.... The stars of excessive smallness, and infinitive in number.” Also note the 7th-mag. carbon star SX Sco.

Placing M7 at the bottom of a wide-field instrument (6° field) find M6, the “Butterfly Cluster” to the northwest, and at the far northeast the “Tom Thumb Cluster,” a faint 8th-mag. object through small instruments, and in large scopes a triangle pattern of stars.

About 4° north west of Shaula are a set of nebulae and clusters, NGC 6334 the “Cat’s Paw,” and NGC 6357 the “Lobster Nebula,” fine targets for 100-mm binoculars (and sometimes mistaken for poor-quality views of the Lagoon and Trifid nebulae!).

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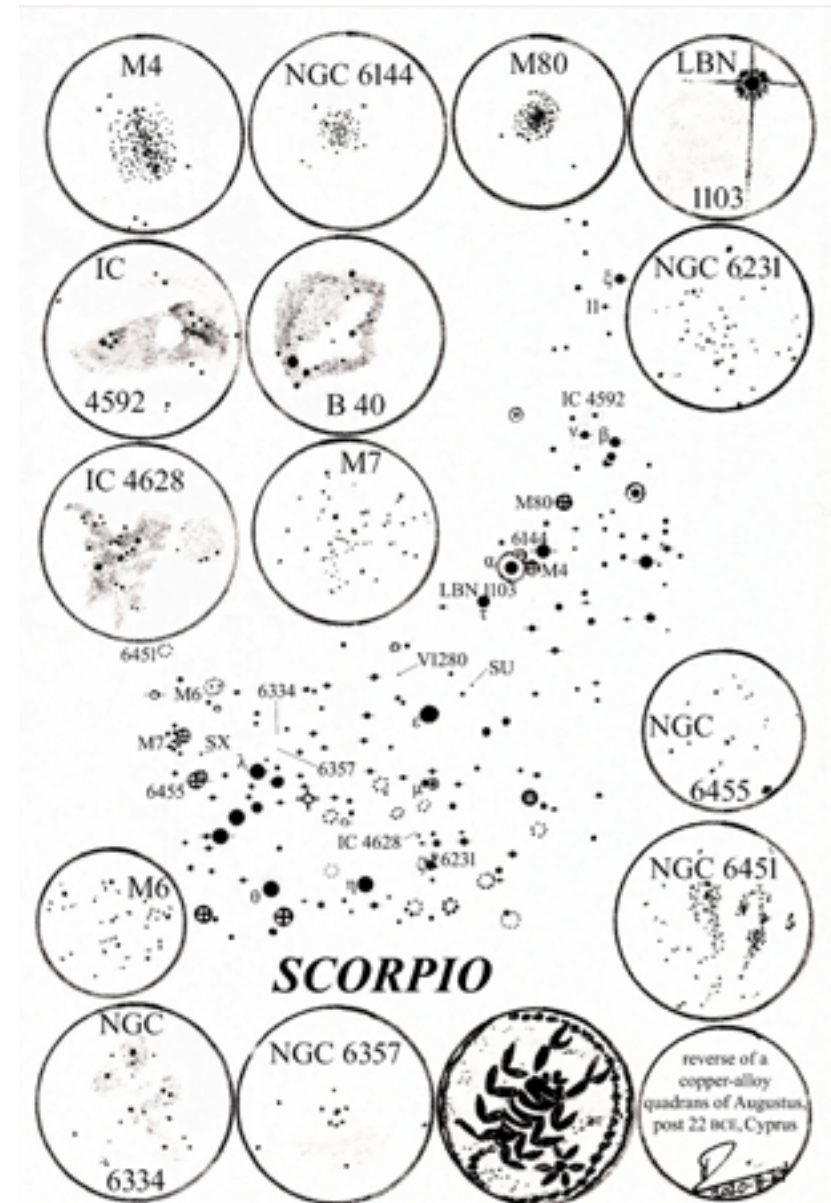


Diagram by Randall Rosenfeld