

The Night Sky Naturalist, by Bob Vickers

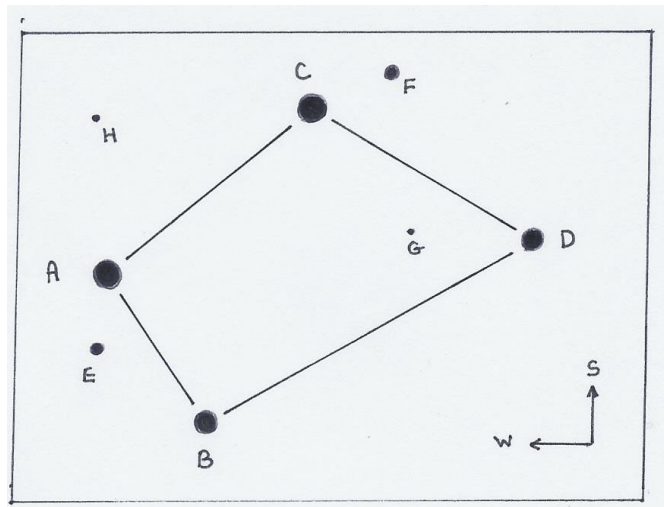
The Trapezium

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The cold and frosty nights of January bring the bright constellation of Orion back to our skies. Its familiar shape, including the three belt stars and sword, is like an old friend. Easily visible to the naked eye, the Great Nebula lies in the middle of Orion's sword, and is usually one of the first deep sky objects that new amateur astronomers observe. It is a large and magnificent nebula of glowing gas and dust. Close study with a telescope is rewarded with views of delicate intricacy more beautiful than any ever created by an artist's brush. But, of course, that is often the way with nature. The brightest parts of the nebula look a little like the outstretched wings of a bird, while near the middle is an indentation or void pointing like a finger to the west and open to the east. This dark bay is also called the Fish's Mouth. Just to its northwest is a group of four stars easily visible in most any telescope at 30-140x, called Theta 1 Orionis. More popularly known as the Trapezium, these four stars range in brightness from magnitude 5.1 to 7.9. Even the closest pair of these four stars are an easy-to-split 8.7". The four components of this multiple star system are lettered in order of right ascension rather than in sequence of brightness as follows:

- A – mag 6.7
- B – mag 7.9
- C – mag 5.1
- D – mag 6.7

Looking deeper, with a moderate size scope, two more stars of the system can be seen. The E component, at magnitude 11.1 is about 4.1" north of A while the F component, at magnitude 11.5 is about 4.0" east-southeast of C. In my 12.5 inch Dob both of these were a bit of a challenge to find but readily apparent when located. (Wait for a good dark night with steady seeing.) There is also a G component about 6"



west of D, and an H component about 8" south of A. Both of these are in the 16th magnitude range and require large apertures. I have tried and failed with both. To my eyes the four brighter stars of the trapezium look white to yellow-white while the two dimmer stars seem to be a grayish lilac. After my recent Twin Lakes Star Party experience where six otherwise rational adults could not agree on the color of the same star, it would be interesting to know what colors other people see.