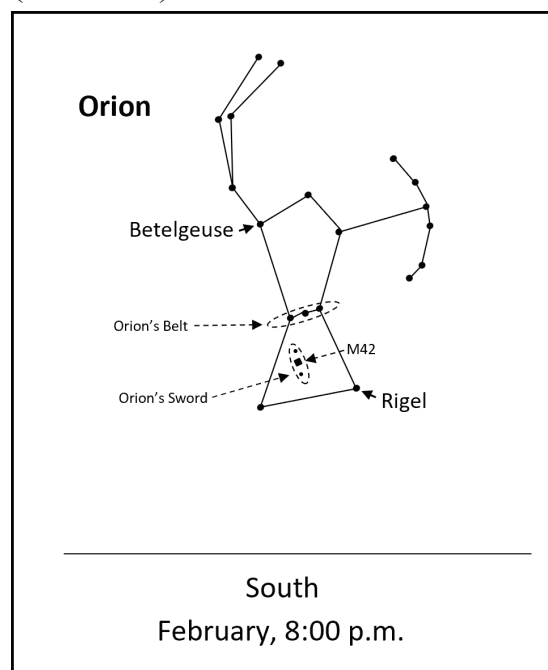


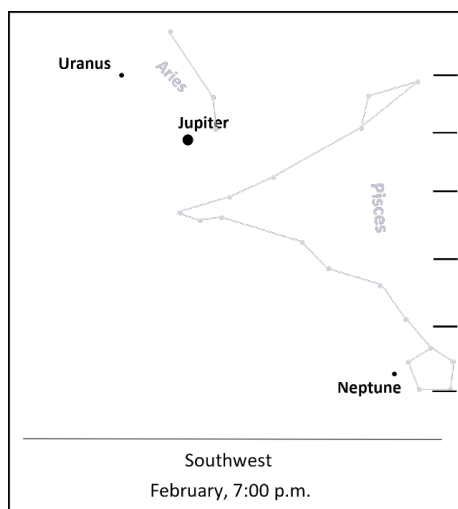
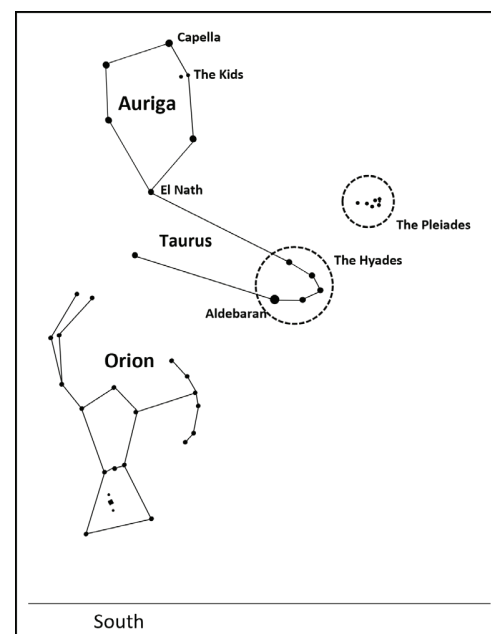
# WHAT'S UP?

Hello! In the last installment of *What's Up?*, I mentioned that regular readers of this column might be starting to recognize our winter constellation friends - Taurus, Orion, Auriga, the Pleiades, and that they are all in the east by nightfall. By 8:00 p.m., look to the south to find Orion standing almost upright in the sky. He's still there earlier in the evening, but to the left (southeast) and he's tilted a bit to his right (our left). This is one of the most ancient constellations and is mentioned in Homer's



*Odyssey*. Some of the mythology about Orion is that he was the son of a god (Poseidon) and the daughter (Euryale) of King Minos of Crete. Orion is linked with the Pleiades (a star cluster in Taurus). The Pleiades are the daughters of Atlas. Orion pursued the sisters and for their protection, Zeus placed them among the stars where Orion still pursues, but never catches up to them. The constellation is home to a red supergiant star that marks the right armpit (*Betelgeuse*) and a blue supergiant (*Rigel*) that marks his left foot. You may have heard of the asterism called *Orion's Belt*. It is a line of three stars that mark the waist of the hunter. The *Sword of Orion* is a string of objects that lie – you guessed where – right where a hunter would wear a sword. The upper and lower ends of the sword are stars but near the middle is a patch of glowing hydrogen gas...the *Orion Nebula*. Also known as *Messier 42* (M42) this is a stellar nursery where new stars and planetary systems are being formed. Its glow, which is visible to us without needing binoculars or telescopes, results from the gasses of the cloud absorbing the ultraviolet radiation produced by the new stars and re-radiating that energy as light that we can see.

Looking through a telescope, the nebula appears as a greenish mist sprinkled with stars. We see it as green because in dim light conditions, our eyes are most sensitive green light. A camera or silicon detector shows M42 in all its full-color glory. Orion also helps us mark the northern and southern celestial hemispheres. The *celestial equator* runs just above Orion's Belt. Above and to the west of Orion is *Taurus, the Bull*. The face of the bull is formed by a V-shaped star cluster called the *Hyades*. The Hyades cluster consists of hundreds of stars that are about 150 lightyears away. Among this cluster of stars is the brightest star in Taurus – *Aldebaran*. Aldebaran marks the bull's eye and is a red giant star. It is not part of the Hyades cluster. It just happens to be along our line of sight to the Hyades. Aldebaran is only 65 lightyears away. *Pioneer 10*, a planetary probe launched from Earth in 1972, is heading in Aldebaran's direction and should be passing near it in two million years or so. Mark your calendars! To the northwest of the Hyades are the *Pleiades*. This group of one hundred or so stars is about 440 lightyears away from us. *Auriga* (the Charioteer) has long been shown as a shepherd, cradling either a goat or a goat and her kids, as he rides through the heavens in his chariot. One variation suggests that the goat in question is Amaltheia, famous for nursing the infant Zeus. Capella, one of the brightest stars in this constellation, is the she-goat and below here are two of her kids. The main shape of Auriga roughly forms a pentagon with one point sharing a star with the constellation, Taurus. The star, *El Nath*, marks the tip of the Bull's northern horn.



**Planet Roundup:** Say goodbye to Saturn for a while. It sets now just after the Sun, around 6:00 p.m. We'll find it next in our pre-dawn eastern sky at the beginning of April. Neptune isn't far behind. It sets in the west now at 8:00 p.m. Fortunately, Jupiter, is still with us! Jupiter shines brightly in the southwest, about halfway up from the horizon. Since Uranus orbits the Sun so much slower than all the planets except Neptune, it is still in much the same spot, but now just 11 degrees above and to the left of Jupiter. It appears closer to Jupiter because Jupiter, on its inner orbit of the Sun, is moving faster than Uranus towards our east. Venus rises at 6:00 a.m. and Mercury and Mars are, both, still too close to the Sun to be seen right now. The New Moon is today (February 9<sup>th</sup>), the 1Q Moon is on the 16<sup>th</sup>, Full Moon is on the 24<sup>th</sup>, and the next 3Q Moon is on March 3<sup>rd</sup>.

You can email me at [astroblog@comcast.net](mailto:astroblog@comcast.net) with any questions and comments. This is *What's Up?* installment #80.

*Barry*