



Night Sky Checklist

July–August–September

Unaided Eye Astronomy

Constellations & Asterisms

Observation	✓	Date	Comments
Draco			
Scorpius			
The Cat's Eyes			
Sagittarius			
Teapot of Sagittarius			
Ophiucus			
Summer Triangle			
Lyra			
Aquila			
Cygnus			
Delphinus			

Stars

Observation	✓	Date	Comments
Antares			
Vega			
Altair			
Deneb			
Epsilon Lyrae			

Deep Sky Objects

Observation	✓	Date	Comments
M6 star cluster			
M7 star cluster			
M8 Lagoon Nebula			
M22 globular cluster			
Summer Milky Way			

Lagniappe

Observation	✓	Date	Comments
Perseids			

What is This Stuff?

**A Guide to the Night Sky Checklists
July–August–September Objects**

The following information may help you understand why these objects are on the Night Sky Checklists.

Constellations and asterisms (Astronomers recognize 88 official constellations, but asterisms are unofficial and made from parts of one or more constellation. All are imaginary dot-to-dot drawings in the sky. See the Lafayette Science Museum’s web site for monthly star maps showing their shapes and positions.)

Draco, the Dragon, is a large, moderately faint constellation whose tail can be found between the Big Dipper and the North Star. Its brightest star, Thuban, was the North Star when the Egyptian pyramids were built.

Scorpius, the Scorpion, is a very large, easily located constellation just above the southern horizon. It’s one of the few really striking ecliptic constellations. Polynesians picture the region of scorpion’s tail and stinger as a fishing hook.

The Cat’s Eyes are a pair of stars side by side where the scorpion’s tail joins its stinger. They are slightly brighter than the stars around them.

Sagittarius, the Archer, in Greek mythology represents a centaur (half man, half horse) shooting an arrow at the scorpion. You’ll need a *lot* of imagination to see that.

The Teapot of Sagittarius is an asterism made from the brightest part of that constellation. Many modern people think it looks a lot more like a teapot than like a centaur. The Teapot is the main part of the constellation.

Ophiucus, the Serpent Handler, is a large somewhat oval group above Scorpius. Although not traditionally considered a Zodiac constellation, the sun actually spends more time in Ophiucus than it does in Scorpius!

The Summer Triangle is a very large triangle visible all night in the early summer. Vega, Altair, and Deneb form its corners, and are three of the 20 brightest stars in the night sky.

Lyra, the Harp, is a small constellation that is surprisingly easy to find because it is dominated by the bright star Vega, one of the corners of the summer Triangle.

Aquila, the Eagle, is a fairly shapeless constellation that is also in the Summer Triangle. It's only bright star is Altair.

Cygnus, the Swan, looks like a stick figure of a swan, wings outstretched, gliding into the Summer Triangle. The bright star at the swan's tail, Deneb, marks the Triangle's third corner.

Delphinus, the Dolphin, is a faint little constellation that is noticeable mainly because it lies just outside the Summer Triangle between Cygnus and Aquila.

***Stars** (The stars on the checklist are easily visible to the unaided eye except in the most light polluted parts of cities.)*

Antares is a red supergiant star estimated to be some 800 times bigger than the sun. It's bigger than the orbits of all the planets in our solar system out through Mars, and even bigger than many of the orbits of asteroids. The brightest star in Scorpius, it is about 600 light years away.

Vega is the 4th brightest star anywhere in the night sky, a blue-white star not quite twice as hot as the sun located about 25 light years away.

Altair is the only bright star in Aquila, the Eagle, and is some 16 light years distant.

Deneb is the brightest star in Cygnus and the third brightest star in the Summer Triangle. At a distance of about 1600 light years (give or take a couple hundred light years), it is one of the most distant stars visible to the unaided eye, and certainly the most distant of the Top 20 brightest stars. The light you see tonight from Deneb started on its way around the time of the Fall of Rome.

Epsilon Lyrae is a faint double star beside Vega. Look at it carefully—can you split the two components of Epsilon Lyrae with the unaided eye? You'll need good eyesight and a clear, dark sky to do it. The pair is easy to split with binoculars, and a telescope 4" in diameter or larger can reveal that each star in the pair is itself double. Epsilon Lyrae is a double-double star!

Deep Sky Objects (DSOs are interesting objects beyond our solar system. Those identified with “M-numbers” are on a popular list compiled by the French comet hunter Charles Messier roughly around the time of the American Revolution. Most deep sky objects look like “faint fuzzies” to the unaided eye, and many are attractive in binoculars or a low power telescope.)

M6 is a faint, fairly small open cluster barely visible to the unaided eye under clear, dark skies. About 1600 light years distant, it can be found between the tail of Scorpius and the spout of the Teapot of Sagittarius.

M7 is another open cluster slightly below M6, brighter, bigger, and much easier to find. It’s quite noticeable under good skies, and is about half as far away as M6.

M8, The Lagoon Nebula, is a star-forming region slightly above the spout of the Tea[pot of Sagittarius. Distances to nebulae can be difficult to obtain, but the Lagoon Nebula is estimated to be slightly over 4000 light years distant.

M22 is a fine globular cluster found just east of the top star in the lid of the Teapot of Sagittarius. To the unaided eye it will look like a slightly fuzzy star. At a distance of nearly 10,000 light years, it is one of the nearest globulars. It’s diameter is close to 100 light years.

The Summer Milky Way is too faint to be seen in town but will be seen far from lights as a milky (!) band across the sky from Scorpius through the Summer Triangle to Cassiopeia. It is our galaxy seen from the inside. Observers looking just to the right of the top of the spout of the Teapot of Sagittarius are looking in the direction of the Galactic Center.

Lagniappe

The Perseid Meteor Shower may be the most widely observed shower of the year. The meteors appear to come from the constellation Perseus, visible in the northeast between midnight and dawn, the prime viewing hours. Like most meteor showers, viewing before midnight is nearly fruitless (as is viewing from the city—if the sky is not dark enough to see the Milky Way, you are unlikely to see many meteors). The peak is usually around August 12, and expecting to see 15–25 meteors per hour is realistic under Acadiana sky conditions. The exact peak and expected numbers vary from year to year. For specific information for the Acadiana area each year, see the Sky Events posted on the Lafayette Science Museum web site or call the Planetarium staff at 337-291-5544.

LSM web site: www.lafayettesciencemuseum.org
Look for the Lafayette Science Museum on Facebook, too!