

Sky **WAA** tch

The Monthly Publication of the Westchester Amateur Astronomers

November 2009



Barnard's Loop

Barnard's Loop spans the entire length of the Orion Constellation. In the image, courtesy of John Paladini, you can also see the region of nebulosity containing the horse-head and flame nebula; the bright object below that is M42—the great Orion Nebula.

Also visible is the Meissa ring, which is centered just above the loop; it is very faint. The Meissa Ring is an illuminated cloud about 150 light years in diameter that is either associated with the formation of Meissa or perhaps the remnant of a supernova that went off from an even more massive star within Meissa's cluster. Meissa (aka Lambda Orionis) marks the head of Orion.

The image is a 2 minute exposure with a Canon DSLR 50mm lens at F 1.9

Events for November 2009

➤ Monthly Meetings

“What Astrophotography Teaches Us about Astronomy”

Friday November 6th, 7:30PM

Andrus Planetarium

Hudson River Museum, Yonkers

Our speaker is Ruben Kier, author of “The 100 Best Astrophotography Targets: A Monthly Guide to CCD Imaging for Amateur Telescopes.” Ruben has contributed to *Sky and Telescope* and *Astronomy* magazines. Free and open to the public.

➤ Starway to Heaven

Saturday, November 14th, 7:00-9:00PM

Meadow Picnic Area, Ward Pound Ridge Reservation, Cross River

This is our scheduled Starway to Heaven observing date for November, weather permitting. Free and open to the public. The scheduled rain/cloud date is November 21st.

Renewing Members. . .

Robin Stuart - Vahalla

Jack Ullman - Bronx

James Frost - Rye Brook

James Steck - Mahopac

Oliver Prache - Pleasantville

Paul Andrews - Patterson

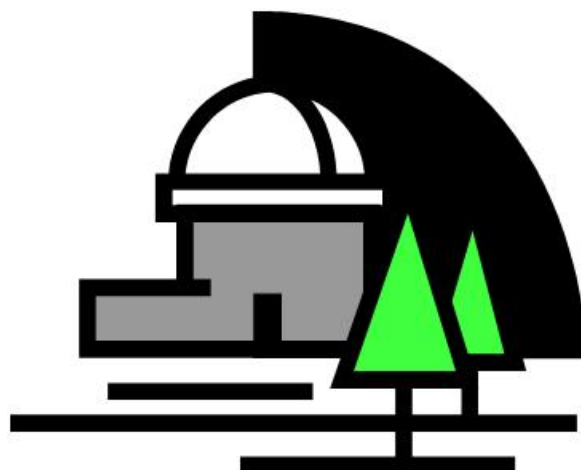
Cindy and Tim Dunne - Scarsdale

Call: 1-877-456-5778 (toll free) for announcements, weather cancellations, or questions. Also, don't forget to periodically visit the WAA website at:

<http://www.westchesterastronomers.org/>.



This photo of Venus, Saturn and Mercury was taken by Bob Kelly from the top of the White Plains Metro North Parking Garage. He used a Canon A40 on a tripod (a 5 sec exposure 3x zoom).



Westchester Amateur Astronomers, Inc., a 501(c)(3) organization, is open to people of all ages with the desire to learn more about astronomy. The Mailing address is: P.O. Box 44, Valhalla, New York 10595. Phone: 1-877-456-5778. Meetings: Andrus Planetarium, Hudson River Museum of Westchester, 511 Warburton Ave., Yonkers. Observing at Ward Pound Ridge Reservation, Routes 35 and 121 South, Cross River. Annual membership is \$25 per family, and includes discounts on *Sky & Telescope* and *Astronomy* magazine subscriptions. Officers: President: Mike Virsinger; Vice President: Charlie Gibson; Vice President Programs (lectures): Pat Mahon; Treasurer: Doug Baum; Vice President Membership: Paul Alimena; Vice President Field Events: David Butler; Newsletter: Tom Boustead.

Articles and Photos

A Visit to the Herschel Museum, Bath, Somerset, England

By Larry Faltz

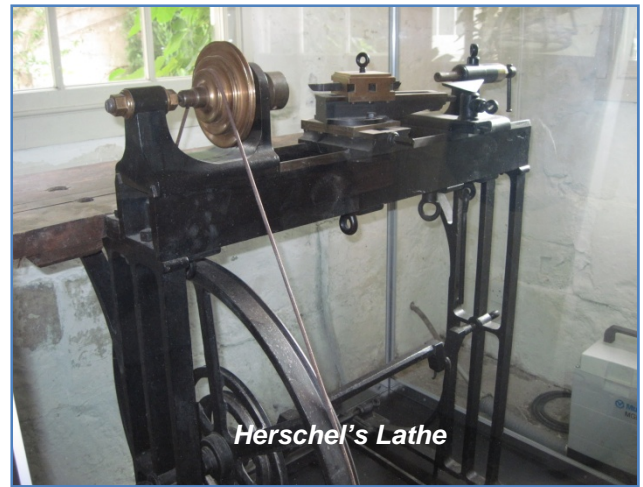
While on vacation in England in September, Elyse and I journeyed to the lovely historic city of Bath, 100 miles west of London and an easy train ride from Paddington Station, to visit the Herschel Museum. Bath, with the only hot spring in England, was settled by the Romans in the 1st century AD. In the 18th century it became an elegant center of arts and culture much favored by the British aristocracy. It's now a UNESCO World Heritage site. William Herschel (1738-1822), Hanoverian by birth, was trained as a musician. He settled in England and made his living as a composer, oboist, organist and conductor. In the early 1760's he moved to Bath to become organist of the Octagon Chapel and Director of Public Concerts. In 1772 his sister Caroline (1750-1848) came from Germany to live with him. He supervised her musical training and she became a celebrated soprano.



New King Street, Bath. Herschel's house is the 5th doorway from the left

In the 1770's, Herschel became interested in mathematics and astronomy. He learned to make reflecting telescopes (with speculum metal mirrors) and was recognized as the finest telescope builder in England. He began a systematic observation program from his small garden, assisted by Caroline, who he tutored in science. In 1781 he discovered the

planet Uranus, which brought him enormous fame. Both he and Caroline gave up their musical careers to become full-time astronomers. He was appointed "King's Astronomer" by George III and moved away from Bath so he could set up larger telescopes (the largest was a 49" diameter reflector, f/9.7). He and Caroline went on to discover and chart many nebulae, double stars and comets. He coined the term "asteroid" and discovered infrared radiation among his many other contributions to science. Caroline gained fame in her own right and can truthfully be named



the world's first female professional scientist. Herschel's son John continued the family interest in astronomy and science. Caroline never married.

Herschel's house, at 19 New King Street, was built in the 1760's and is typical for the area. It has 4 stories and a basement. The lower two floors and basement are used as the museum. A reproduction of his 6" telescope (it uses an alt-az yoke mounting) accompanies a variety of astronomical and musical artifacts, period furniture, paintings and household items. Most interesting are letters from William and Caroline, a lock of Caroline's hair and a roster in her hand listing the rich and famous, including the King and Queen, who came to visit after the discovery of Uranus. Herschel's

workshop, off the garden, has his lathe, furnace and other telescope-making tools.

The garden is quite small, perhaps 20x40 feet. The house obstructs the view to the north and northeast, but there are clear views in other directions with the ecliptic in a good position for observing. In the 1700's, the night sky must have been quite dark even in town, although English weather could not have provided a vast number of clear nights for the Herschels to observe.



A visit to England can't do without a trip to the Royal Observatory in Greenwich (we went there too), but don't overlook Bath and the Herschel Museum (and visit the Roman baths as well). It's definitely worth a day trip from London. Every amateur astronomer should make the pilgrimage.



Elyse with one of Caroline Herschel's dresses



Crab Nebula

The Crab Nebula is the result of a supernova seen in 1054 AD. It is filled with mysterious filaments. The filaments are not only tremendously complex, but appear to have less mass than expelled in the original supernova and a higher speed than expected from a free explosion. The image was taken by the Hubble Space Telescope.

Credit: NASA, ESA, J. Hester, A. Loll (ASU); Acknowledgement: Davide De Martin (Skyfactory.)

Constellation Corner

By Matt Ganis

There's something "fishy" in the sky. No, I don't mean there is anything suspicious, I mean that literally we have some fish overhead this month. Let's take a look.

In our southern skies this month is the constellation of Cetus, the whale. Of course, I call it a whale, but as with many constellations, there is no one specific creature represented by this constellation. To the ancient Babylonians it was the great sea monster that symbolized Chaos. For others, it was depicted as a sea-serpent or dragon fish. Others saw it as a great whale. It is probably best known however as the sea monster sent by Poseidon to devour Andromeda. Of course, as the story goes, Perseus arrived on the scene just in time to slay the dreaded monster and claim Andromeda as his bride.

As the story goes, Andromeda's mother, Cassiopeia, got the young princess into this mess by claiming to be more beautiful than the sea nymphs themselves. Upon hearing this, Aphrodite was angered and ordered that Andromeda be fed to Cetus the sea monster as a punishment. Thankfully, Perseus came along and saved the princess by showing the sea monster the severed head of the gorgon Medusa which in turn changed Cetus to stone.

To the south of Cetus the whale lies the constellation of Pisces. Pisces is known as a "faint constellation" and is represented by two fishes whose tails are tied together.

According to the Roman mythology, one of the sons of Gaia and Tartaros, Typhon, decided to overthrow Zeus. Typhon was a monstrous god who was very tall and sported a wicked

gleam in his eyes. According to the myth, he had a hundred dragon-heads sprout out of his hand, in place of his fingers.

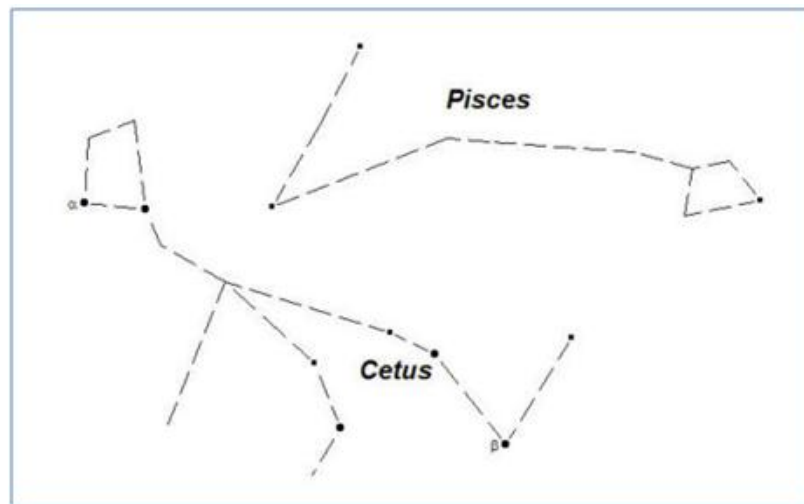
Many of the gods on Mount Olympus went into hiding fearing his atrocities. However, one day, Typhon happened to see Venus (the goddess of beauty) and her son Cupid (the god of love) on the banks of a river. To escape from his clutches Venus and Cupid turned into fish and

swam into the depths of the river. So they would not be separated in the strong river current they tied their tails together.

Once in the river, they were saved by other fishes and were later hung in the sky along with the

other celestial objects in the northern skies. According to legend, this was done to commemorate the day when the goddess of beauty and god of love were saved from being destroyed.

So in the spirit of saving space, I'll just cover those two constellations (since they're well placed in our evening skies). But for the record, if we're talking about "fishy" constellations, we'd have to consider: Dorado (the goldfish), Hydra (the water serpent), Serpens (the Serpent) and Volans (the flying fish). But those are "Fish Tales" for another time....).



Almanac

For November 2009 by Matt Ganis



Nov 2



Nov 9



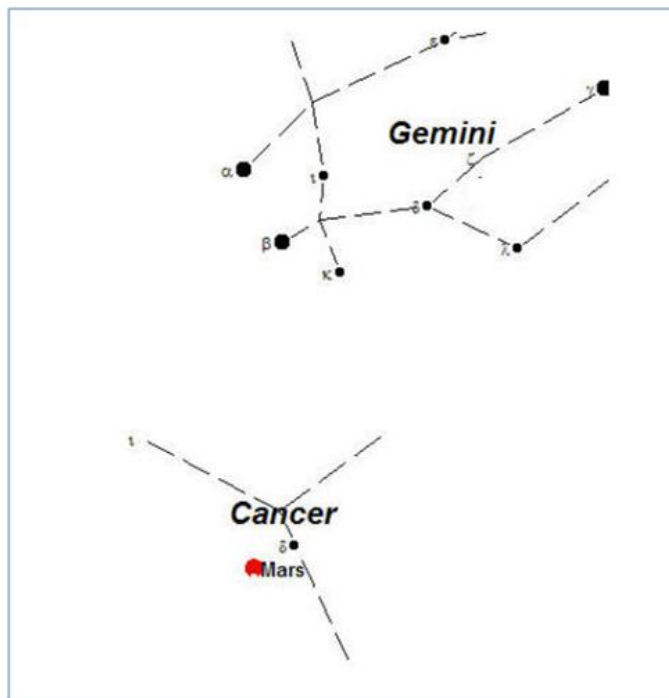
Nov
18



Nov
24

For quite some time now, Jupiter has dominated the evening sky, shining in the sky by itself since summer. This trend continues, for the most part, throughout the rest of the year. Jupiter is easy to find, shining brighter than any other point of light in our southern skies – glowing at an apparent magnitude of -2.4. Jupiter is currently located in the constellation of Capricornus and is moving toward a close conjunction (next month) with Neptune, where it will come within a half degree of the outer planet.

On the opposite side of the sky (in the East) Mars is slowly rising into the evening sky. Shining at an apparent magnitude of +0.2, Mars is much dimmer than Jupiter. Its distinctive reddish color makes it easy to pick out, however, as it rises in the east late in the evening around 10pm. The “Red Planet” is still in the constellation of Cancer the Crab, home to the popular Beehive Cluster (M44). Its moving slowly through the sky until early February, when it will pick up speed and shoot past the Cluster.



observers don't have to stay up late to catch the most meteors, but the bad news is that the shower is not a stronger performer, with only about eight meteors an hour at peak.

The second meteor shower in November is the Leonids. Predawn on November 17 and 18 is the best time to look. The meteors, courtesy of Comet Temple-Tuttle, appear to come from the constellation Leo, which does not rise fully until after midnight. A predicted pulse of activity on November 17th — with hundreds of meteors per hour — will involve contributions from the comet's debris from 1102, 1466, and 1533.

Fortunately, the Moon will be just past new on that date, so skies should be good and dark. Unfortunately for those of us in the Americas, this outburst will be rather short (lasting an hour or so) and occur at or before sunset. It may be worth a try if you have a good view of the horizon!

On the 17th, moonless conditions make this year's Leonid meteor shower a potential “don't miss” event!!

Two meteor showers occur about a week apart in November. The first is the Taurid meteors, which begins around November 4 and peaks overnight on November 11. Debris from Comet Encke is the source of the meteors, which appear to emanate from the constellation Taurus. The good news is that Taurus is already rising in the early evening so