

Newsletter of the Baton Rouge Astronomical Society

[www.braastro.org](http://www.braastro.org)



**August 2013**

**Next meeting Aug 12<sup>th</sup> 7:00PM at the HRPO**

**Dark Site Observing Dates: Primary on Aug. 3<sup>rd</sup>, Secondary on Aug. 10<sup>th</sup>**



Photo credit: Saturn taken on 20" OGS + Orion Starshoot - Ben Toman



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## PRESIDENT'S MESSAGE

Hi Everyone,

I hope you've been having a great Summer so far and had luck beating the heat as much as possible. The weather sure hasn't been cooperative for observing, though!

First I have a pretty cool announcement. Thanks to the efforts of club member Walt Cooney, there are 5 newly named asteroids in the sky.

(53256) Sinitiere - Named for former BRAS Treasurer Bob Sinitiere

(74439) Brenden - Named for founding member Craig Brenden

(85878) Guzik - Named for LSU professor T. Greg Guzik

(101722) Pursell - Named for founding member Wally Pursell

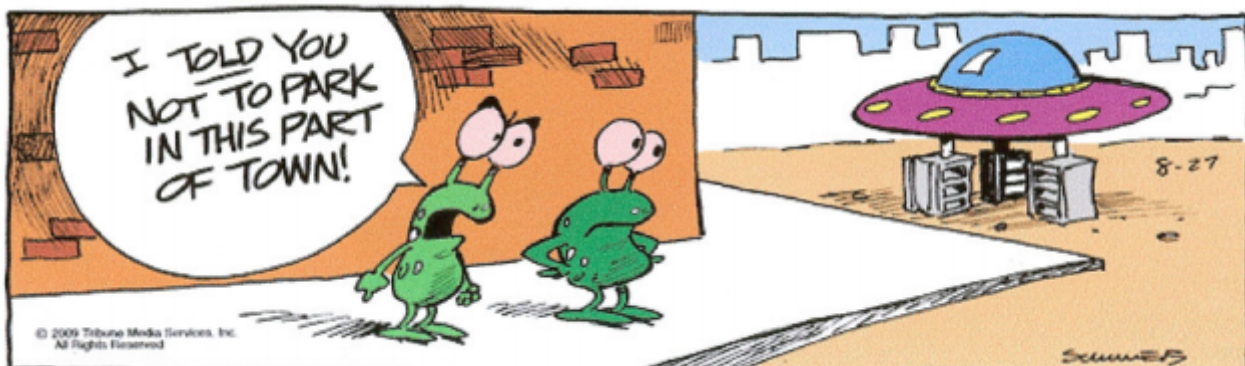
(162158) Merrillhess - Named for Merrill Hess, member and important to the founding of the HRPO.

This is pretty exciting news and congratulations are due to all involved. Walt, for his work in discovering them (along with whomever may have also helped) and to each of these five gentlemen for their contributions to BRAS, the HRPO and astronomy education in our community.

Second, I would like to take this time to thank Geoff Michelli for his efforts in publishing our newsletter for at least the last year or more. It is a time consuming endeavor, for sure. With that in mind, we've all come to realize that we need a person that is not already holding a position in the club (officer, Observing Chair, Outreach Chair, etc.) to take over these duties. It just takes up too much time for someone already trying to perform other club duties as well. If you would like to participate in gathering content for our newsletter each month and try to find new ways to make it exciting and interesting to read (even when it seems there is nothing going on and no one will give you any ideas!), please let us know. You can email me at [tomanben@gmail.com](mailto:tomanben@gmail.com)

Finally, I hope to see you all out at the observatory for our meeting on August 12<sup>th</sup> at 7PM at the HRPO. Please feel free to bring along a friend.

Clear Skies,  
Ben Toman  
BRAS President



## NOTES FROM THE VICE PRESIDENT

The topic for our feature presentation at our next BRAS meeting will be on celestial navigation delivered by BRAS member Jim Gutierrez. None of this electronic stuff for Jim. He will tell us how to do it the old fashioned way – by knowing the stars, the time and date, and taking measurements from the stars, moon, and sun.

Here is a preview of the presentations for the next several months.

October: astrophotography for amateurs. BRAS members Chris Deselles and Steve Boeker will first show us how to take simple, easy, and cheap astrophotos, and go into all levels of commitment, from moderate skill, equipment and cost to the most advanced. Most of their talk will be on how most of us with little equipment, money, or expertise can take fine astrophotos.

November: We will do something different. I have contacted Tom Field, a Contributing Editor of Sky & Telescope magazine, who will present a Webinar on “Real-Time Spectroscopy”. Tom will show us how to observe, take photos, and even video of stellar spectra and analyze it using simple techniques, either for our own entertainment or interest, or to do real scientific research. Should be exciting.

Of course, our December meeting will be our annual Christmas Party and officer election. Think about who you want to run for officer positions – President, Vice-President, Treasurer, and Secretary. Remember, some of us (ahem) are term-limiting this election and new officers will have to be elected to take their places. Also, think about whether you want to do something a little different with this next Christmas meeting. Different food, entertainment, whatever. Of course, we always hope Ashley will serenade us on her harp.



## MESSAGE FROM THE HRPO

### FRIDAY NIGHT LECTURE SERIES

*all start at 7:30pm*

2 August: “Skygazing—The Objects”

9 August: “Three-Dimensional Printing”

16 August: “Commercial Exploration of Space”

23 August: “The Life and Death of Stars”

### CALL FOR VOLUNTEERS: ON SITE

\* Saturday, 3 August from 6pm to 10pm. *Two volunteers in addition to regular BRAS compliment, each for two-hour shift.* **Evening Sky Viewing Plus.** Marshmallow roast, demo and clock tables; small telescope; setup and takedown. Easy; training provided.

\* Sunday, 11 August from 10pm to 2am. *Two volunteers, each for two-hour shift.* **Perseid Meteor Shower.** Telescope operation and/or desk duty and/or floating, depending on volunteer.

\* Saturday, 31 August from 6pm to 10pm. *Two volunteers in addition to regular BRAS compliment, each for two-hour shift.* **Evening Sky Viewing Plus.** Marshmallow roast, demo and clock tables; small telescope; setup and takedown. Easy; training provided.

### RESIGNATION OF HRPO EDUCATION CURATOR

Erin Anding, who for the past two years served her community as Education Curator of HRPO, is stepping down at the beginning of August to pursue a career in librarianship. Erin contributed greatly to the ongoing success of Science Academy and the national “piggyback” events in which HRPO took part, such as Vesta Fiesta and the annual Observe the Moon Night. Attendance in the STEM-oriented Science Academy increased dramatically during her tenure. HRPO personnel wish her all the best.





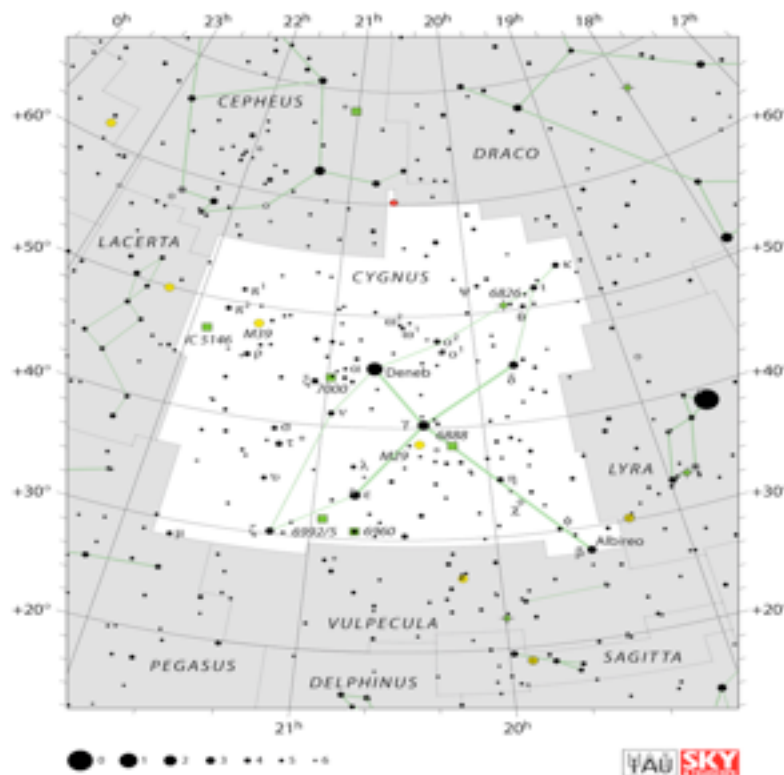
# MONTHLY OBSERVING NOTES

## Constellation of the Month – CYGNUS the Swan

Position RA 20.62 hours, DEC. + 42.03

Named Stars Deneb

(Alpha Cyn) - obsolete name “Aried”, a blue white supergiant. Mag. 1.26, position 20 41 25.91 +45 16 49.2 Deneb is the 19<sup>th</sup> brightest star in the sky, and is located at the top of the “{Northern Cross”. Midnight culmination (opposition) date is about August 1<sup>st</sup>. Deneb is the faintest of the three 1<sup>st</sup> magnitude stars which outline the well known “Summer Triangle”, consisting of Vega, Deneb, and Altair. The name of the star is from Al Dhanab al Dajajah, “The Hen’s Tail”, and another Arabic name was “Aradif” from Ridf, “The Hindmost”, another allusion to its location in the tail of the Swan. Albireo(Beta Cyn), “Al Minhar al Dajajah”, or “The Hen’s Beak”. Mag. 3.09, position 19 30 43.29 +27 57 34.9. A double star, the brighter is a golden yellow at mag. 3.18, and the companion is sapphire colored at mag. 5.82, with a separation of 34.3”. Albireo A is a double star to close for telescope resolution.



Separation between A and B for telescopic resolution. Separation is projected to be 9.4 arc seconds. Sadr(Gamma Cyn), “The Breastbone”, mag. 2.23, position 20 22 13.7 +40 15 24.1. At 142” from Gamma lies a 10<sup>th</sup> magnitude companion. This star is a close double with a separation of about 2”, and individual mag. are 10 and 11. Gienah(Epsilon Cyn), “The Wing”, mag. 2.46, position 20 46 12.43 +33 58 10.0. Probably a spectroscopic binary- a 12<sup>th</sup> magnitude field star, but the two stars form only



an optical pair.

However, there is a much fainter physical companion, designated LTT/6072, it is a red dwarf of the 15<sup>th</sup> magnitude, 78" distant, nearly due west. Rukh(Delta Cyn), mag. 2.87, position 19 44 58.44 +45 07 50.5. A triple star (with the binary of Delta Cyn as the common), very difficult to see because the companion star lies virtually on the first diffraction ring of the primary, and is mag. 6.5, with a separation of some 220 AU. The 3<sup>rd</sup> star is a 12<sup>th</sup> magnitude orange giant. Azelfafage(Pi Cyn) is two star systems. Pi Cyn-1(Azelfafage), mag. 4.67, position 21 42 05.66 +51 11 22.7, and Pi Cyn-2, mag. 4.23. A spectroscopic binary, Pi-2 has traditional names: Pennae Cauldalis- "Tail Feathers" in Latin; and Sama al Azrab "The Blue Sky" in Arabic. Ruchba(Omega Cyn) "The Hen's Knee", position 20 30 03.53 + 48 57 05.6, two visual double stars, 1/3 ° apart. Omega-1 mag . 4.95. Omega-2, mag. 5.27, position 20 31 18.81 + 49 13 13.3.

#### Deep Sky Objects

- M29 (NGC 6913), an open cluster, mag. 7.1, position 20 23.9 + 38 32, about 1.7° SSE from Gamma Cyn. About 7' by 1.5 light year in diameter.
- M39 (NGC 7092), an open cluster, mag. 5.5, position 21 32.2 +48 26, 9° ENE from Deneb or 2 1/2 ° West and 1°South of Pi-2 Cyn. Size 32' by 8 light years diameter.
- NGC 6960, "The Filamentary Nebula", "The Western Veil", also called "The Witch's Broom", forms the western most part of "The Wedding Veil Nebula". Position 20 45.7 +30 43, size 70' by 6'.
- NGC 6992, "The Network Nebula", position 20 56 4 +31 43, 60' by 7', "The Eastern Veil", forms the eastern part of "The Wedding Veil Nebula", with NGC 6995(20 57.1 +31 13 12),and IC 1340( 20 56.2 + 31 04, 25' by 19'). About 2 1/2° to WSW is NGC 6960, which crosses the field of 52 Cyg , mag. 4, position 20 43 6 + 30 32.
- NGC 6946 ( Arp 29, Caldwell 12), "The Fireworks Galaxy", mag. 9.6, position 20 34.9 +60 09, size 11.0' by 9.8'. Open cluster
- NGC 6939, position 20 31.4 +60 38) is 0.6° NW. Nine supernovae have been observed in this galaxy since it was discovered on Sept. 9 1798 by Fredrick William Herschel - Sn1917A, SN1939C, SN1948B, SN1968DE, SN1969P, SN1980K, SN2002hh, SN2004et, and SN2008S.

Deep sky objects continued on next page...



NGC 6946 ( Arp 29, Caldwell 12), "The Fireworks Galaxy", mag. 9.6, position 20 34.9 +60 09, size 11.0' by 9.8'. Open cluster NGC 6939, position 20 31.4 +60 38) is 0.6° NW. Nine supernovae have been observed in this galaxy since it was discovered on Sept. 9 1798 by Fredrick William Herschel - Sn1917A, SN1939C, SN1948B, SN1968DE, SN1969P, SN1980K, SN2002hh, SN2004et, and SN2008S.

NGC 7000 (Caldwell 20) "The North American Nebula", an emission nebula, mag. 4, position 20 58.8 + 44 20, size 2.0° by 1.7°. The "Cygnus Wall" is in the part of the nebula that corresponds to Mexico and Central America. It lies 3° East of Deneb.

NGC 6997 – lies within the North American Nebula.

NGC 6826 "The Blinking Nebula", mag. 8.8, position 19 44.8 + 50 31, size 25' diameter. It is near Theta Cyg (to the east), and within 1° of the nebula is 16 Cyg.

NGC 6888 (Caldwell 27, Sharpless 105), "The Crescent Nebula", position 20 12.0 + 38 21, size 19' by 9'. Located between Gamma Cyg. and Eta Cyg. Formed by the Wolf-Rayet star HD192163 (WR136), mag. 7.48, position 20 12 06.54 + 38 21 17.8.

NGC 6974 and NGC 6979 – regions of nebulosity located in a cloud at the northern edge of the Veil Nebula.

NGC 6910 "The Rocking Horse Cluster", mag. 7.4, position 20 23.1 + 40 47, 7' diameter. Part of the Gamma Cygni Nebula.

IC 1318 "The Gamma Cygni Nebula (in the Sadr region), position 20 21.0 + 39 54, size 3.3° by 2.3°, surrounds Gamma Cyg.

IC 5067 and IC 5070 "The Pelican Nebula". IC 5067 position 20 47.8 + 44 22, size 25' by 10'. IC 5070 position 20 50.8 + 44 21, size 80' by 70', and is the eastern portion of the Pelican Nebula. The nebula is a HII region, and is NE of Deneb and is separated from the North American nebula by a large molecular cloud filled with dark dust.

IC 5068, position 20 50.8 + 42 31, size 80' by 29'. 1 1/2° to the south of the North American Nebula, in a detached region.

IC 1318A, the Gamma Cyg "Dolphin Nebula", position 20 16.6 +41 49, 50' in size and 15' in diameter

DWB 87 – A bright emission nebula, 7.8' and 4.3' size in the Gamma Cygni area.

Sharpless 2-112, position 20 34.5 +46 52, 30' by 19', an open cluster, Berkley 90 is embedded within it.

Berkley 90, an open cluster, position 20 35 14.4 + 46 50 35, 30' by 20'.

IC 1318B, position 20 26 5 + 40 18, 50' size, East Wing of the Butterfly Nebula.

IC 1318C, position 20 28 7 + 39 54, 40' size, West Wing of the Butterfly Nebula.

Berkley 86, position 20 20.5 + 38 42, mag. 7.9, 6' size.

Berkley 87, position 20 21.8 + 37 42, 10' size.

Collinder 419, position 20 18.1 + 40 43, 5' size, SE portion of IC 1311.

Collinder 421, position 20 23.4 + 41 42, mag. 10.1, 7' size.

Dolidze 42, position 20 19.0 + 38 08, 11' size, between IC 4996 and M29.

DWB 111 "The Propeller Nebula", position 20 16 10 + 43 40 11.

Dolidze 9, position 20 25 42 + 41 56 00, 7' size, about ¾ of the way from Deneb to Sadr.

Dolidze 11, position 20 26 30 + 41 27 00, 7' size.

B348 "The Northern Coalsack" or "The Cygnus Rift", position 19 34 00 + 42 05, 60' by 3' size.

LDN 896, "The Northern Coalsack".

B168, position 21 53.2 +47 12, 1.7° by 2° in size, meanders to and engulfs IC5146 (The Cocoon Nebula) at its eastern end, and marks the beginning of "The Great Rift" of the Milky Way.

B361, position 21 12 45 +47 25, located 1° ESE of 63Cyg and SSE of IC1369, 30' in diameter.

B343, "The Ghost Nebula", position 20 13 5 +47 25, 10' by 5' in size, located in the northern part of IC1318 and approximately 1.7° west of Gamma Cyn.

PN G75.5+1.7, "The Soap Bubble Nebula", position 20 15 26 + 38 02 25, near the "Crescent Nebula" (NGC6888).

Kranberger 61, "The Soccer Ball Nebula", position 19 21 39 + 38 18 57, discovered in 2011 by an amateur astronomer.

New discovered nebula associated with 4Cyg (HD183056), an approximately fan shaped region of several arc minutes diameter, to the south and west of 4Cyg (mag. 5.17, position 19 26 09.12 + 36 19 04.3).

Pickering's Triangle, also known as Pickering's Wedge or Pickering's Triangular Wisp, part of the "Veil Nebula".

The Cygnus Loop (Sharpless 103) - A large supernova remnant, almost 3° across the sky, forming an emission nebula. It is a strong source of soft X-rays. The arcs of the loop that emit visible light are known as "The Veil Nebula", and the rest of the loop can be detected in radio, infrared, and x-ray images. It is 90 light-years in size.





Cygnus A (3C405), mag. 16.27, position 19 59 28.35 + 40 44 02.096. It is the first radio galaxy discovered and one of the strongest radio sources known, located next to Gamma Cyg. In the visible spectrum, it appears as an elliptical galaxy in a small cluster. It is classified as an active galaxy because the super massive black hole at its nucleus is accreting matter, which produces two jets of matter from the poles. The jet's interaction with the interstellar medium creates radio lobes, one source of radio emissions.

Cygnus X-1, close to Eta Cyg., is a well known x-ray source, the first one to be accepted as a black hole candidate. HDE 226868, of 13<sup>th</sup> magnitude, is at the position of the x-ray source and is a binary with a period of 5.6 days. One star is a blue supergiant variable (mag. 8.95, position 19 36 49.30 + 50 11 59.0), and the other a compact object that is small for its mass- a white dwarf, a neutron star, or a black hole.

The Northern Cross is formed by 5 stars- Deneb(Alpha Cyg), Delta Cyg, Albireo(Beta Cyg), Gienah(Epsilon Cyg), and Sadr(Gamma Cyg).

Patchik 56- a small asterism, 3.3 by 2.2 arc minutes- appears as a group of 6 stars described as resembling a dolphin.

#### Other Stars

Zeta Cyg, mag. 3.20, position 21 12 56.18 + 30 13 37.5. Zeta Cyg and the star CCDMJ21129+3014B form a binary system with a 49.9 year orbit. The 12<sup>th</sup> magnitude companion is believed to be a white dwarf.

Tau Cyg, mag. 3.74, position 21 14 47.35 + 38 02 39.6, a double star. GJ822.1A(mag. 3.84), companion GJ822.1B(mag. 6.44).

Kappa Cyg, mag. 3.814, position 19 17 06.11 + 53 22 05.4, marks the tip of the swan's left wing.

Eta Cyg, mag. 3.909, position 19 56 18.40 + 35 05 00.6, an orange giant.

61 Cyg, "Bessel's Star" or "Piazzi's Falling Star"- a double star, a pair of white dwarfs, (A) mag. 5.21, position 21 06 50.84 + 38 44 29.4, and (B) mag. 6.03, position 21 06 52.19 + 38 44 03.9. 61 Cyg was the first star, other than the Sun, to have its distance from the earth measured.

34 Cyg (P Cyg)- a variable star, mag. 4.8 to 8, position 20 17 47.20 + 38 01 58.6. A hyper giant luminous blue variable. LVBS are rare and only found in regions of intense star formation.

39 Cyg, mag. 4.436, position 20 23 51.60 + 32 11 24.7, an orange star.

Theta Cyg, mag. 4.490, position 19 36 26.54 + 50 13 13.3. Has a faint companion (mag. 13.03) about 3 arc seconds away, a red dwarf possibly having an exo planet in its system.

16 Cyg- a triple star, position 20 03 36.95 + 29 53 53.1. Consists of 2 yellow dwarfs, mag. 5.96 and 6.20, and the 3<sup>rd</sup> is a red dwarf. An exo planet has been discovered in an excentric orbit around 16Cyg B..

Gliese 777, a yellow sub giant, mag. 5.71, position 20 03 36.95 + 29 53 53.1. Has a dim red dwarf companion, mag. 14.40, and

is suspected of being a binary star. Primary star has 2 confirmed exo planets.

Mu Cyg is a binary with an optical tertiary companion. Primary mag. 4.8, position 21 44 08.59 + 28 44 33.4. Secondary mag. 6.2, position 21 44 08.46 + 28 44 34.5. The unrelated tertiary is mag. 6.9. Pri. and Sec. has an orbit of 789 years.

Omicron Cyg- a contrasting double star 30 Cyg and 31 Cyg, position 20 13 37.9 + 46 44 28.8. Primary is 31 Cyg, mag. 3.8, an orange star. Secondary is 30 Cyg, mag. 4.8, a blue green star. The primary, 31 Cyg is a binary, with the tertiary star a mag. 7.0 blue star. Pri to Sec separation is 338", and Pri to Ter separation is 107".

Psi Cyg is a binary, with 2 white components. Position 19 59 22.60 + 30 09 11.6, Pri mag. 5.0, Sec mag. 7.5.

Chi Cyg is a semi-regular red giant variable. Mag. 3.3 to 14, position 20 43 24.20 + 35 35 16.1, 2° SW of Eta Cyg.

NML Cyg (V1489) is a red hyper giant and semi regular variable- possibly the largest star currently known with an estimated radius of 1,650 solar radii, or 7.67 AU. Has a mag. 16.60, position 20 46 25.6 + 40 06 59.4, and a 940 day period.

SS Cyg is a close binary with a 50 day cycle and a complete orbital revolution is slightly over 6 12/2 hours. Red and white dwarfs, mag. 8 to 12, position 21 42 42.8 + 43 36 09.88.

Upsilon Cyg is a variable star, mag. 4.28 to 4.50, position 21 17 55.07 + 34 53 48.8.

W Cyg is a semi regular red giant with a period of 130 days. Mag. 5 to 8, position 21 36 02.44 + 45 22 28.5



## Exo Planets

Cygnus hosts over 65 planets

HAT-P-7b, mag. 10.5, position 19 28 59 + 47 58 10  
HAT-P-11b, mag. 9.59, position 19 50 50.25 + 48 04 51.1  
HD 185269b, mag. 6.67, position 19 37 11.74 + 28 29 59.5  
HD187123b and c, mag. 7.86, position 19 46 58.11 + 34 25 10.3  
Gliese 777b and c, mag. 5.73, position 20 03 36.95 + 29 53 53.1  
16CygBb, mag. 6.25, position 19 41 52.10 + 50 31 04.5  
Kepler 22b, mag. 11.66, position 19 16 32.2 + 47 53 4.2, the first Earth twin planet found.  
Kepler5b, mag. 13.9, position 19 57 37.68 + 50 02 06.2  
Kepler6b, mag. 13.8, position 19 47 20.94 + 48 14 23.9

## Meteor showers

October Cygnids between Sept. 26<sup>th</sup> and Oct. 10<sup>th</sup>.  
Kappa Cygnids July 26<sup>th</sup> to Sept. 1, max on Aug. 18<sup>th</sup>

Cygnus has over 200 Double and Multiple stars

Over 145 Variable stars

Between 146 and 197 naked-eye members of the constellation

Over 35 star clusters, nebulae, and galaxies

Over 10 stars with known planets

# Cygnus – the Swan

A popular name for Cygnus is the “Northern Cross”, and indeed its shape is far larger and more distinctive than the famous “Southern Cross”. In its cruciform shape the Greeks visualized the long neck, outstretched wings, and stubby tail of a swan flying along the Milky Way, in which it is embedded. The mythographers tell us that the swan is Zeus in disguise, on his way to one of his numerous love affairs, but his exact target is a subject of some disagreement.

The version of the tale that goes back to Erastosthenes says that Zeus one day took a fancy to the nymph Nemesis, who lived at Rhamnus, some way north-east of Athens. To escape his unwanted advances, she assumed the form of various animals, first jumping into a river, then fleeing across land, and finally taking flight as a goose. Not to be outdone, Zeus pursued her through all these transformations, at each step turning himself into a larger and swifter animal, until he finally became a swan, in which form he caught and raped her. Hyginus tells a simpler story, but does not mention the metamorphosis of Nemesis. Rather, he says, Zeus pretended to be a swan escaping from an eagle and Nemesis gave the swan sanctuary. Only after she had gone to sleep with the swan in her lap did she discover her mistake.

In both versions, the outcome was that Nemesis produced an egg which was given to Queen Leda of Sparta, some say by Hermes and others say by a passing sheppard who found the egg in a wood. Out of the egg hatched the beautiful Helen (later to become famous as Helen of Troy).

A simpler version says that Zeus seduced Leda in the form of a swan by the banks of the river Eurotas. Leda was the wife of King Tyndareus of Sparta, which considerably complicated the outcome because she also slept with her husband later that same night.

According to one interpretation, she gave birth to a single egg from which hatched the twins Castor and Polydeuces as well as Helen. A rival account says that Leda produced two eggs, from one of which emerged Castor and Polydeuces, while from the other came Helen and her sister Clytemnestra. To add to the confusion, Polydeuces and Helen were reputedly children of Zeus, while Castor and Clytemnestra were fathered by Tyndareus. Castor and Polydeuces are commemorated by the constellation Gemini, where Polydeuces is better known to astronomers by his Latin name, Pollux.



Cygnus is also sometimes identified with Orpheus, the Greek tragic hero who was murdered by the Thracian Maenads for not honoring Dionysus. After death, Orpheus was transformed into a swan and placed next to his lyre in the sky. The lyre is represented by the neighboring constellation Lyra.

Cygnus constellation is also sometimes associated with any of several people called Cynus in Greek mythology. The most famous ones are Cynus, the murdered son of Ares, who challenged Heracles to a duel and was killed; Cynus, the son of Poseidon, who fought on the side of the Trojans in the Trojan war, was killed by Achilles, and transformed into a swan after death; and Cynus, a close friend of Phaeton, the mortal son of the Sun god Helios.

Of the above three, the myth of Phaeton is the one most frequently associated with the Cygnus constellation. In the story, Phaeton and Cynus were racing each other across the sky when they came too close to the Sun. Their chariots burned up and they fell to the Earth. Cynus came to and, after looking for Phaeton for a while, he discovered his dead friend's body trapped at the bottom of the Eridanus River (also a constellation- Eridanus). He was unable to recover the body, so he made a pact with Zeus: if the god gave him the body of a swan, he would only live as long as a swan usually does. Once transformed, Cynus was able to dive into the river, retrieve Phaeton's body, and give his friend a proper burial. This allowed Phaeton's soul to travel to the afterlife. Zeus was moved by Cynus' sacrifice and placed his image in the sky.

Some people have asked me what my sources are for the monthly Constellations. Here is a list of most sources:

Burnham's Celestial Handbook, Volumes 1, 2, and 3

Messier's Nebulae and Star Clusters, by Kenneth Glyn Jones

Sky Atlas 2000.0 Companion, 2<sup>nd</sup> edition

Star Tales, by Ian Ridpath

The Audubon Society Field Guide to the Night Sky

The Night Sky Pocket guide, Oceana

Sky Spot's books, Select Double Stars, Overlooked Objects, Bright Telescope Objects, The Messier Objects Vol. 1 and 2

RASC Observer's Handbook, 2013

Astronomy Magazine

Sky and Telescope Magazine

Sky News Magazine (Canadian)

Skywatch 2013, a Sky and Telescope publication

Pocket Sky Atlas, Sky and Telescope Publication

Sky Atlas 2000.0, Deluxe Version, by Wil Tirion and Roger W. Sinnott, a Sky and Telescope Publication

The AAVSO Variable Star Atlas

The Strolling Astronomer, The Journal of the Association of Lunar and Planetary Observers

The Journal of The Royal Astronomical Society of Canada

Science Magazine, a publication of AAAS, the American Association for the Advancement of Science

Web Sites

Wikipedia.org

Constellationsofwords.com

Maps.seds.org

Constellation-guide.org

Topastronomer.com

Astro.wisc.edu

Dibonsmith.com

Ianridpath.com

Happy Reading, John R. Nagle, BRAS Observing Chairman



## Sky Happenings for August

Aug. 3<sup>rd</sup> The crescent Moon passes 4° south of Jupiter at 5:00 PM CDT.

Aug. 4<sup>th</sup> The crescent Moon passes 5° south of a faint Mars at 6:00 AM CDT

Mercury passes 7° south of Pollux at 10:00 PM CDT

Aug. 5<sup>th</sup> The Moon, a thin crescent low in the ENE, passes 4° south of Mercury at 4:00 AM CDT

Aug. 6<sup>th</sup> New Moon occurs at 4:51 CDT

Aug. 9<sup>th</sup> A thin crescent Moon passes 5° south(lower left) of Venus at 9:00 PM CDT- low in the west ½ hour after sunset

Aug. 11-13 The Perseid meteor shower peaks , with almost no Moon. Rates should be better after midnight.

Aug. 12<sup>th</sup> Dawn – the Moon passes 0.6° north of Spica at 4:00 AM CDT

Evening – The Moon is 5° below Saturn (mag. 0.7) and 8° to Spica's upper left

Aug. 13<sup>th</sup> Dawn – The Moon passes 3° south of Saturn at 3:00 AM CDT

Dusk – The wide double star Alpha Librae, also called Zubenelgenubi, is very close to the right or upper right of the 1<sup>st</sup> quarter Moon

Aug. 17-20 Dawn- Mars forms a short arc with similiary bright Castor and Pollux to it's upper left.

Aug. 19<sup>th</sup> Mars passes 6° south of Pollux at 7:00 AM CDT

Aug. 20<sup>th</sup> Full Moon at 8:45 PM CDT

Aug. 21<sup>st</sup> Moon passes 6° north of Neptune at 10:00 AM CDT

Aug. 24<sup>th</sup> Moon passes 3° north of Uranus at 2:00 AM CDT

Aug. 31<sup>st</sup> Dawn – Jupiter shines to the left of the crescent Moon, and the Moon passes 4° south of Jupiter at 12:00 noon

Twilight – Venus is 6° NW of Spica

Venus , mag. -3.9, is 15° to 17° above the western horizon and sets ½ hour after the Sun all month

Saturn, mag. 0.6, on Aug. 1<sup>st</sup> is 20° above the SW horizon at end of twilight, and by Aug. 31<sup>st</sup> is only ½ as high. Saturn starts the month 1° SE of Kappa Virginis, and ends the month 2 1/2° away. In early Aug. the rings span 38" and tilt 17° to our line of sight. Titan, mag. 8, is north of Saturn on the 2<sup>nd</sup> and 10<sup>th</sup> and south of Saturn on the 18<sup>th</sup> and 26<sup>th</sup>.

Tethys, Dione, and Rhea, mag. 10, are closer to Saturn than Titan. Iapetus is well to the west with its greatest elongation on Aug. 17<sup>th</sup>.

Neptune On Aug. 1<sup>st</sup> will be due west of Sigma Aquarii (mag. 4.8). On Aug. 26<sup>th</sup> and 27<sup>th</sup> will be in opposition to the Sun with a mag.7.8 in central Aquarius. On Aug. 31<sup>st</sup> will be 1.8° from Sigma Aquarii. , mag. 5.8, is 3.6° south of

Uranus, mag. 5.8, is 3.6° south of Delta Piscium, mag. 4.4

Mars, mag. 1.6, In early Aug. will be 5° from Jupiter, and nearly 20° by month's end. Will cross from Gemini into Cancer during the last week of Aug. and ends the month 5° west of M44- the Beehive Cluster.

Mercury, mag. -0.1, On Aug.1<sup>st</sup>, will be 10°high in the ENE 30 minutes before sunrise, and grows brighter to mag. -1.0 on Aug. 9<sup>th</sup>

Pluto, mag. 14, is in Sagittarius

Asteroid 7 Iris, mag. 7.9, is opposite the Sun on Aug. 16<sup>th</sup>. Is located in western Aquarius SW of the great square of Pegasus. On Aug. 16<sup>th</sup> and 17<sup>th</sup> is 40' north of Beta Aquarii.

Asteroid 3 Juno, mag. 9.0, is in opposition on Aug. 4<sup>th</sup> in extreme eastern Aquarius.

### Meteor Showers

Perseids On the nights of Aug. 11-12 and 12-13 are at peak. Radiant point in northern Perseus – high in the NE sky around midnight

The Delta Aquarids and the Kappa Cygnids are weaker showers



## OUTREACH CHAIRPERSON'S NOTES

### Sidewalk Astronomy Request

It is almost August, and Sidewalk Astronomy takes some time to get setup. For some reason, it is very difficult to solicit a response at all from businesses, let alone an affirmative one, so I want to start early and hopefully get a good location for this coming observing season. For the last two years, we have held Sidewalk Astronomy at local Community Coffee locations. The advantage to that is that the customers can't possibly say they are busy, because they are buying coffee at 9PM and sitting around drinking it. The disadvantage is that we simply didn't get a lot of traffic; additionally, people thought (I assume) we were going to try to sell them something, and gave us a wide berth, often utilizing the further entrance from us.

For this coming season, I would love as many suggestions as possible. Bear in mind that lighting isn't a primary concern; the primary objective is the public at the eyepiece. We will typically show Saturn, the moon, and other bright things. So I am looking for places that are well trafficked, open until 9 or 10PM, and that are 'sufficiently far' from the observatory. Two years ago, we held an event on Millerville Rd, and I wouldn't consider Zachary as being out of bounds.

I have fond memories of the Local Group of Deep Sky Observers in Sarasota, FL, where I got my start in outreach, holding a huge monthly event year round at a shopping center similar to our Town Center, but with less death-by-traffic. The powers that be would cordon off an area and shut off the parking lot lights, the coffee shop in the center stayed open later, and hundreds of people showed up everytime. That took years to build up, but we can surely accomplish something here.

I have helmed this project for 2 years, but this is my last year because I'm leaving Louisiana next summer. So if we can get a good program set up this winter, with a nice, permanent location, it would be easier for someone to operate in my stead next year and beyond.

-Trevor McGuire



# BATON ROUGE ASTRONOMICAL SOCIETY

## MEMBERSHIP APPLICATION



You can pay your membership dues at our next meeting or send your dues to:

**Baton Rouge Astronomical Society, Inc.**  
**c/o Geoff Michelli, Treasurer**  
**10457 Barry Dr.**  
**Baton Rouge, LA 70809**

If you have questions about dues or receiving your newsletter, call Geoff at (225) 573-4313 or send an email to [geoff@michelli.net](mailto:geoff@michelli.net)

For new members joining, the amount is pro-rated for the initial year based on which quarter the membership begins. The rates are reflected below. 4th quarter rates also cover the following year.			Membership renewals are \$20, and are due in January of each year.	
Jan - Mar	\$20.00	\$ _____	Date _____	
Apr - Jun	\$15.00		Name _____	
Jul - Sep	\$10.00		Address _____	
Oct - Dec	\$25.00		_____	
Each Additional Family Member	\$5.00	\$ _____	Phone Home _____	
Student Membership (through age 17)	\$10.00	\$ _____	Cell _____	
Donation* toward club building fund or (specify) _____		\$ _____	Work _____	
TOTAL ENCLOSED		\$ _____	Email _____	

**The Society's newsletter Night Visions is sent via email.**

If you prefer to receive the newsletter via mail, please check this box ☐

PLEASE CHECK THAT YOUR ADDRESS AND E-MAIL ARE CURRENT AND CORRECT

Meetings are usually held the second Monday of each month at 7PM, except for June and July. Most meetings are held at the Highland Road Park Observatory

\* All donations to the Baton Rouge Astronomical Society, Inc. are tax-deductible under IRS section 501(c)(3) & (a)(1) and also 170(b)(1)(A)(vi).  
 The Baton Rouge Astronomical Society, Inc. is a nonprofit corporation chartered under the laws of the State of Louisiana

