

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the
Astronomical League

Vol. 16, No. 1 **March, 2012**

Officers: President/Newsletter Editor, **Bill Warren:** (770)229-6108, warren7804@bellsouth.net; Vice President, **Larry Higgins;** Secretary-Treasurer, **Steve Bentley.**

Board of Directors: **Dwight Harness;** **Tom Moore;** **Mike Stuart;** and **Jessie Dasher.**

Facebook/Scouting/Ga. Sky View Coordinator, **Steve Knight;** Alcor, **Caros Flores;** Webmaster, **Tom Moore;** Observing Coordinator, **Dwight Harness;** NASA Contact, **Felix Luciano.**

Club mailing address: 1212 Everee Inn Rd., Griffin, GA 30224. Web page: www.flintriverastronomy.org.

Please notify **Bill Warren** if you have a change of home address, telephone no. or e-mail address.

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Club Calendar. Sat., Feb. 25: Griffin Civil Air Patrol presentation/observing, 6:30 p.m./7:15 p.m.; **Thurs., Mar. 1:** Jackson Road (Griffin) Elem. observing, 6:30 p.m.; **Sat., Mar. 3:** Rainout date for Griffin CAP presentation/observing; **Tues., Mar. 6:** Daughtry (Jackson, GA) Elem. Science

Night observing (6:00 p.m.); **Thurs., Mar. 8:** FRAC meeting (7:30 p.m., Rm. 219 of the Flynt Bldg., UGa-Griffin); **Thurs.-Sun., Mar. 22-25:** **Georgia Sky View** weekend star party (Camp McIntosh, Flovilla, GA); **Thurs., Mar. 29:** UGa-Griffin lunar observing, 7-10:00 p.m.).

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President's Message. It was time for the one sermon every year that **Jessie Dasher** didn't look forward to delivering: the one where he reminded the congregation to renew their annual pledges of financial support. That wasn't what he was called for, of course, but it needed to be done periodically so the church could continue to pay its bills on time.

Jessie was uncharacteristically nervous as he began to speak. Forcing what he hoped was a friendly smile onto his face, he looked out over the congregation, took a deep breath and said, "And now, dear funds..."

Okay, so that didn't really happen. And you've heard that old joke before, too. I just used Jessie – with his permission – so you'd keep on reading to the punch line.

Like your church, FRAC needs your money. Your \$15 annual dues were up for renewal in February, so consider this your snooze-alarm wakeup call if you forgot to pay earlier. Send your check (payable to FRAC) to: **Bill Warren, 1212 Everee Inn Road, Griffin, GA 30224.**

Beyond that, there's **Georgia Sky View.** Registrations for **GSV 2012** are lagging; you need to fill out a registration form – it's on our website's GSV link – and a check (made out to FRAC) for the appropriate amount and send them to: **Steve Knight, 114 Central Lake Circle, Griffin, GA 30223.**

We don't host our weekend star party as a money-making event – but we don't host it to lose money, either. Failure to at least break even this year probably would have

two unfortunate results: the officers and board would be unlikely to vote in favor of FRAC's conducting any future **GSVs**, and our annual club dues could go up in 2013. We need your participation to ensure that those things don't happen.

There are other reasons why you should consider attending **GSV** on Mar. 22nd-25th:

*It's a relaxing, kick-back-and-enjoy-yourself, four-day/three-night escape from the grind and pressures of everyday living. Your schedule is whatever you want it to be, and the only one worrying will be **Steve Knight** because he knows he'll get blamed for anything that goes wrong, including the occasional cloudy night.

***Ga. Sky View** is sort of like a weekend cruise to the Bahamas, only without the ship and the beaches. And instead of girls in bikinis, you get **Larry Higgins** in his longjohns.

GSV is more fun than you can have anywhere without worrying about the cops showing up. (And if they do show up to answer a complaint, you can blame it all on Steve.)

Seriously, if you enjoy being around your fellow club members at meetings and observings, **GSV** offers a greatly expanded opportunity to share in that fellowship and fun. We aren't limited to a couple of hours together at **GSV**. You'll learn more about astronomy, telescopes, etc., than you could ever imagine doing in so short a time – and if you're having problems, you'll be surrounded by people who can help you solve them.

Before signing off, on behalf of the officers and board members I'd like to thank you for reelecting us to serve you again in 2012. We'll do our best to justify your faith in us.

Finally, here's a warm FRAC welcome to our newest member, **Aaron Calhoun** of Griffin. Aaron has been in astronomy for 11 years, and in fact he has volunteered to

speak at our Mar. meeting. His topic will be "Orion." (And *No*, **Ken Walburn**, he won't be talking about the black-and-white cookies with the vanilla centers.)

-Bill Warren

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Last Month's Meeting/Activities. Our Jan. 26th Fortson Library observing was rained out, so we did it – "we" being **yr. editor** and his wife **Louise**.

Dwight Harness and **yr. editor** gave a solar system presentation at Pike Co. Elementary School on Feb. 8th.

Having correctly anticipated **Betty Bentley's** superlative cooking, a fine crowd of 21 FRACsters and a guest showed up for our FRAC birthday party meeting: **Steve Knight; Jessie Dasher; Aaron Calhoun; Betty & hubby Steve Bentley; Brit & Tom Danei; Ben & Woody Jones; Charles "Prince of Darkness" Turner; Tom Moore; Larry Higgins; Laura & Dwight Harness; Steven "Smitty" Smith; Erik Erikson; Felix Luciano; Doug Maxwell; Roger Brackett & Jane Barresi; Joseph Auriemma; and yrs. truly.**

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This 'n That. Congratulations are in order for our two latest FRAC members to receive their A. L. Outreach Club pins: **Doug Maxwell** and **Roger Brackett**.

Yr. editor received his Master Outreach pin, bringing his total to 16 pins. Doug now has four observing pins, and Roger's was his first. (Hey, ya gotta start somewhere!)

***FYI:** Here are the GPS coordinates for our observing sites:

Cox Field: 33.156206 N, 84.431004 W

Kurtz Rock: 33.19508 N, 84.51201 W

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Upcoming Meetings/Activities. At 6:30 p.m. on **Sat., Feb. 25th**, FRAC will conduct

an indoor presentation for the Griffin Civil Air Patrol (CAP), after which we'll go outside for an observing at the Griffin airport walking track. At least 50 people are expected to attend, so we'll appreciate your help if you can make it.

The rainout date is 6:30 p.m. on **Sat., March 3rd**.

To get to the CAP Bldg. from anywhere in Griffin, head south toward Griffin Airport on Hill St. Once you pass the Kiwanis Fairgrounds on the right, turn right at the stoplight at Airport Road. The CAP parking lot is about 50 yds. ahead on the right.

If you prefer to skip the indoor presentation and meet us at walking track at 7:15, drive past the CAP parking lot, turn right about 100 yds. ahead and wait for us there. (Don't drive out onto the lawn before we get there.)

At 6:30 p.m. on **Thurs., March 1st**, we'll conduct an observing at Jackson Road (Griffin, GA) Elementary School. We've been there several times in the past, and they always treat us splendidly. The teachers keep tight reins on the children, and everyone has a blast.

To get to JRE from, say, Hampton, go to I-75 South and get off at Exit 205 (Hwy. 16). Bear right, and about ¼ mi. ahead turn right onto Jackson Road. The school will be on the right about 7 mi. ahead, at the top of a long, steep hill. Drive behind the school, and we'll set up on the large field at the far end of the road, beyond the traffic circle and playground.

On **Tues., Mar. 6th**, we'll visit Daughtry (Jackson, GA) Elem. for another "Science Night" observing. It will begin at 6:00 p.m.

To get to Daughtry Elem. from, say, Griffin, head E on Ga. Hwy. 16 (Arthur K. Bolton Pkwy.). Set your odometer at 0.0 when you cross I-75, and stay on Hwy. 16 for an addition 5.1 mi. to Shiloh Road. (There's a sign indicating Shiloh Rd. to the left, and a church with a white spire – Rising

Star Missionary Baptist Church – on the far left at the road.) Turn left onto Shiloh Rd., and the school will be 0.2 mi. ahead on the right.

When we visited Daughtry last year, they gave us free pizza. **Dwight Harness** went back for seconds so many times that, when he finally settled down at his 'scope, he looked like a chipmunk with acorns stuffed in its cheeks. Whenever kids or their parents asked him a question, his reply waws "Mmmf mmbllgrbr..."

Large crowds will be there on both nights, Daughtry and Jackson Road, so wipe the cobwebs out of your telescope tube and c'mon out and join us on either or both nights.

Our monthly club meeting will be at 7:30 p.m. on **Thurs., March 8th**. Due to scheduling conflicts, Rm. 305 will not be available on our meeting nights from March through June. For those four months, we'll meet in Rm. 219 of the Flynt Bldg. (Once you enter the building, go up the remaining five steps, turn left and Rm. 219 is at the end of the hall on the left.)

Ga. Sky View, which will run from **Thurs., Mar. 22nd –Sun., Mar. 25th**, will take the place of our regularly scheduled Cox Field and Kurtz Rock observings this month.

We will, however, resume our UGa-Griffin lunar observing schedule on **Thurs., Mar. 29th**, from 7-10 p.m. on the lawn in front of the Flynt Bldg.

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STAR PATTERNS AND ASTERISMS:

Part One

by Bill Warren

(Note: I'll be speaking on this topic at Ga. Sky View this month.

Two other things: First, I've limited the asterisms and star patterns to those that can be seen from our latitude. And second, I make no claim to completeness in this overview of asterisms. If I've left out some of your personal favorites – well, sorry 'bout that.

–Bill)

An **asterism** might be loosely defined as “a random alignment of stars that forms a recognizable pattern or shape that we associate with something familiar.”

Some asterisms are small; others are very large. Some can be seen without optical assistance, while others require binoculars or a telescope. Some of them closely resemble their namesakes, and others require a bit of imagination. But that's part of the fun of asterisms.

Fun?

Well...in a word, *Yes*. Asterisms are the cotton candy of astronomy: they're solely for enjoyment. You don't have to know anything about astronomy to appreciate an asterism. You just enjoy the view.

When Is an Asterism Not an Asterism?

(Ans.: When it's a constellation.)

Technically, constellations are not asterisms. I have no idea why this is so, but I think it's a mistake not to regard at least some of them as asterisms. Constellations are the most recognizable and important star patterns in the sky. For beginning stargazers, learning to navigate the night sky without GoTo entails learning to find the constellations.

At any rate, rather than embroil myself in a debate as to what an asterism is or is not, I'll treat constellations and asterisms as separate categories of star patterns. But I think it's important to consider them both when discussing star patterns.

Asterisms: What's In a Name? The **Summer Triangle** is large, bright and

serves as a guidepost in the summer night sky. Yet those factors alone do not make it an asterism. It's an asterism because the term “*Summer Triangle*” defines a *specific triangle*.

The same is true of other familiar 3- and 4-star combinations such as **Orion's Belt** and the **Great Square of Pegasus**. Their names identify them as asterisms. Most other 3- and 4-star combinations – and there are literally millions of them sprinkled across the telescopic sky – are simply triangles, rectangles, etc.

Naked-Eye Star Patterns and Asterisms

Constellation Patterns. In ancient times, humans looked up at the night sky and saw groups of bright stars forming patterns that they associated with mythological beings, animals or objects. Those bright star patterns became known as constellations.

Today, the term *constellation* has a very different meaning. It refers, not to star patterns, shapes or stick figures, but to regions of the sky. Everything in the sky lies in one or another of the 88 constellations, whether permanently (e.g., stars) or temporarily (e.g., the **Sun, Moon** and planets). Yet the constellations are still identified by the bright star patterns associated with them.

In that sense, at least, all of the constellation patterns are asterisms. But only a few of them bear a resemblance to the beings, animals or objects they represent.

Scorpius does in fact resemble a *Scorpion* with a stinger at the end of its tail. (It has also been likened to a *capital J* -- or a *fish hook*, complete with barb.)

Delphinus looks like a *Dolphin* – but it also is sometimes seen (and referred to) as **Job's Coffin**. *Bootes* resembles a *kite*, not a *Herdsmen*; *Corona Borealis* looks like a *tiaara*, not a *Northern Crown*; and

Capricornus looks like a *bikini bottom*, not a *Sea Goat* (whatever that is).

Leo looks like a *Lion* facing west.

Cygnus looks like a *Swan* in flight. (Seen the other way, it's the **Northern Cross**.) If you borrow the constellation *Andromeda* to give *Pegasus, the Flying Horse*, rear legs, it actually resembles a horse (running, not flying). And I guess you could say that *Eridanus (the River)* looks like a river, since rivers can meander anywhere they want.

Orion (the Hunter) and *Hercules (the Strongman)* are the most recognizable human figures.

Asterisms Within Constellation Patterns. In addition to the **Great Square** that forms the midsection of *Pegasus (the Flying Horse)* some of the more familiar asterisms that comprise all or parts of constellation patterns include:

*The **Hyades** (Melotte 25, the **V**-shaped face of *Taurus, the Bull*);

*The **Big Dipper** in *Ursa Major* and the **Little Dipper** in *Ursa Minor*;

*The 4-star **Keystone** that forms the broad shoulders and narrow waist of *Hercules*;

*The **Sickle**, or backward question mark that forms *Leo's* head;

*The **Teapot** in *Sagittarius*;

*The "**Bent W**" of *Cassiopeia, the Queen*;

*The **Circlet** that lies below the Great Square in *Pisces*;

* Melotte 111, the witch's hat-shaped part of *Coma Berenices* that forms **Berenice's Hair**;

*The 4-star, **Y**-shaped **Water Jar** from which *Aquarius (the Water Bearer)* pours water into the mouth of *Piscis Austrinus, The Southern Fish*;

***Orion's Belt**, with **Orion's Sword** lying beneath it; and

*The **Kids** (in *Auriga*). *Auriga* was a *Charioteer* – but he was also thought to be a

shepherd, and was often depicted as holding a goat over his shoulders with three kids – little goats, not children -- in his lap. Those three kids are the stars **Epsilon, Zeta** and **Eta Aurigae**.

Multi-Constellation Asterisms. The **Summer Triangle**, a familiar guidepost in the summer sky, consists of bright stars from three constellations: **Vega (Alpha Lyrae)**, **Deneb (Alpha Cygni)** and **Altair (Alpha Aquilae)**.

In winter, the enormous **Heavenly G** asterism consists of **Capella** (in *Auriga*), **Castor** and **Pollux** (in *Gemini*), **Procyon** (in *Canis Minor*), **Sirius** (in *Canis Minor*), **Aldebaran** (in *Taurus*), and **Rigel** and **Betelgeuse** (in *Orion*). All of those stars except mag. 2 Castor are 1st-magnitude stars and rank among the 20 brightest stars in the night sky. Together, they incorporate stars from six constellations to form a huge but easily recognizable capital letter **G**.

Other Naked-Eye Asterisms. The **Pleiades** (in *Taurus*) is one of the brightest and most recognizable patterns in the night sky. It is an asterism due to its name, and not to any resemblance to the **Seven Sisters**, daughters of **Atlas**. (Most people see five or six bright stars forming a tight little Dipper.)

*The **Bull of Poniatowski**. Named for Polish **King Stanislaus Poniatowski** in 1777, this 5-star, **V**-shaped *Taurus, the Bull* look-alike was at one time regarded as a constellation. Today, it's an asterism occupying a small part of a large constellation. Like the Pleiades, the Bull is visible to the naked eye but best seen in binoculars.

All of the asterisms mentioned thus far are visible to the naked eye.

Binocular Asterisms

*The **Orion S** is a chain of 11 stars forming a large capital **S** that weaves its way

through Orion's Belt. The pattern begins above **Mintaka (Delta Orionis)**, the westernmost star in the Belt), continues downward between Mintaka and **Alnilam (Epsilon Orionis)**, the Belt's central star) and ends below Alnilam.

***M6**, an open cluster in *Scorpius*, is often referred to as the **Butterfly Cluster** due to its distinctive outline.

***M44 (The Beehive)**, a large open cluster in *Cancer*, reminded early astronomers of a swarm of angry bees. A faint haze to the unaided eye, it's spectacular in binoculars or any telescope.

*The **Lozenge**, a 4-star trapezoid in *Draco*, looks about as much like a cough drop as I look like **Brad Pitt**.

***Delphinus Minor**, a scaled-down yet virtually identical version of the constellation *Delphinus*, measures 1° in length and is located along the western border of the Great Square. It was discovered by **Dana Patchick**, as reported by **Sue French** in *Sky & Tel* in Dec., 2007.

***Collinder 399** (a.k.a. **Brocchi's Cluster**) in *Vulpecula* has a third and far more familiar appellation, i.e., The **Coathanger**. Its ten stars include a 6-star crossbar and a 4-star hook. The cluster is more than a degree in diameter, and is best seen in binoculars or a wide-field 'scope. A small telescopic open cluster, **NGC 6802**, lies at the Coathanger's eastern end.

(Part Two, appearing next month, will conclude with telescopic and STAR asterisms.)

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Opposite: You get four nebulae for the price of one in **Alan Pryor's** lovely photo of the reflection & emission nebula **M78**.

M78 is, of course, the star of the show, its two mag. 10 stars embedded in nebulosity like headlights in fog near the center of Alan's photo. But there is also:

tiny **NGC 2067**, the faint patch of nebulosity to the lower right of M78 and separated from it by a dust lane; larger **NGC 2067**, seen faintly to the upper right of M78; and **NGC 2071**, a Herschel II Club nebula near the top of the photo.

Lying 15' NNE of M78, 2071 features a mag. 10 star and faint companion. Fainter than M78, 2071 requires good seeing and transparency to be detected visually.

In his HII notes for 2071 **yr. editor** wrote, "The nebula was about 4' x 3' and irregularly shaped at 55x or 147x on an evening of average transparency and poor seeing. My nebula filter didn't help: it obscured the companion star and didn't intensify the nebulosity, unlike other evenings when, under better observing conditions, the nebula lived up to its reputation as an M78 look-alike."

North is at the top of the photo, directly above M78.

Alan writes, "In retrospect I did not get enough exposure on it. However, I had to wait until the **Moon** set before shooting. Then I had to stop after 3 hrs. due to a tree in the way. The exposure was 9 sets of 5 min. LRGBs using the Takahashi 130 at 1000MM f.l."

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