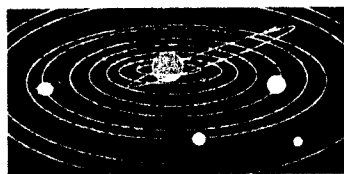


THE FLINT RIVER OBSERVER



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FLINT RIVER ASTRONOMY CLUB

May, 1999

Officers: President, **Steven (Smitty) Smith** (583-2200); Vice President/newsletter editor, **Bill Warren** (229-6108 -- or, if you prefer e-mail: warren1212@mindspring.com); Secretary-Treasurer, **Ken Walburn** (P. O. Box 1179, McDonough, GA 30253 / 954-9442; AICor, **Neal Wellons**, and Web Site Coordinator, **Cody Wellons** (946-5039); Librarians, **Tom and Katie Moore** (228-6447); Telephone/Hospitality Committee Chairman: **Dan Pillatzki** (707-0270). Club mailing address: 1212 Everee Inn Road, Griffin, GA 30224. All of these phone numbers have 770 area code prefixes. FRAC web page address: <http://welcome.to/frac>.

Please notify **Bill Warren** promptly if you have a change of address.

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Club Calendar. Thurs., May 6: FRAC meeting (Beaverbrook media center, 7:30); **Fri., May 7:** Beaverbrook "First Light"/FRAC joint observing (BB, at dark); **Fri.-Sat., May 14-15:** FRAC deep-sky observing (Cox Field, at dark)..

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President's Message. I'd like to give a hearty "Welcome aboard!" to **Robby Mask** of Fayetteville. Our newest member, Robby is 14 and says he's most interested in the planets, though he doesn't have a telescope yet. Well, our two closest planetary neighbors, **Venus** and **Mars**, are both easy to find and in good positions for your viewing pleasure right now, Robby. I'm sure that you'll also find the members of FRAC willing to share time at the eyepiece of their telescopes with you too.

Things so near and those much farther away. I urge all of you to document your observations of Venus and Mars as soon as you are able to do so, since FRAC now has information about the AL's new Planetary Observing Club. We will try to distribute copies of the requirements for this club to all members at an upcoming meeting. (You can also get it off the AL's internet site.) Let me add, for those of you who are new to observing the planets, that colored filters are a necessity and aperture stops are sometimes desirable. Ask some of us "old salts" if you need help constructing an aperture stop for your 'scope.

Let's not forget the deep sky, either. The Virgo cluster of galaxies is high in the sky during the evening hours now. For those of you who are working on your Messiers, this is a most challenging area so don't get frustrated! Try to become familiar with *Virgo*, and if you can't record observations on all of its Messiers then next year you'll welcome back this part of the sky like an old friend.

I was glad to see so many FRAC members attending the AAC's **Peach State Star Gaze** last month. I hope that you all had as good a time as I did! And yes, that was **your faithful president** you saw flipping pancakes at the Saturday morning pancake breakfast.

The Peach State was the first public display of the new binocular observing chair that I built recently. One observer who sat in it had his \$330 TeleVue 27mm Panoptic eyepiece fall out of his pocket and into the chair while he was tilted back looking at the sky; can you imagine the terror that must have struck at his heart later, when he realized what was missing? He and about a dozen others were out on the observing field at 4 a.m. looking for the errant eyepiece, which was eventually found and

reunited with its owner. Such honest behavior is common at past PSSGs I've attended and with the AAC. (Say, **Bill**, how about if I install a big magnet under my chair and we start our collection of club eyepieces?)

After the Peach State I met a FRAC member who was denied entrance to the event. He was not pre-registered, and when he showed up at the main gate to pay his registration fee he was told that the event was full. A staff member said they would call him at his pager number when something could be arranged but that never happened. I can attest that the event was packed, and I'd guess that someone forgot to call him since other walk-ins (e.g., **Tim Astin**) were allowed access. I wasn't at the gate when all this happened, so I have nothing upon which to base any judgment in the matter -- but I will say this: *To make sure you can gain access to this event next year, PRE-REGISTER!* If you don't know how many days you will be attending beforehand, at least pre-register for one day. You can always add more days and pay the difference when you arrive. 'Nuff said!

"Take sensor readings on those two bright planets, **Mr. Mask!**"

-Steven (Saratoga Smitty) Smith

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Last Month's Meetings/Activities. Fifteen members watched and listened in awe at our April meeting as **yr. addlepated reporter**, speaking on the topic, "Organizing Your Search for the Spring Messiers," managed to lose five galaxies and an entire constellation (*Leo*). But our club library now possesses two huge (3'x4') laminated maps of the spring constellations *Ursa Major*, *Canes Venatici*, *Coma Berenices* and *Virgo* -- and you can borrow them anytime you want! Just let **Tom** or **Katie Moore** know in advance, and they'll bring them to the next meeting.

Ten people showed up at Beaverbrook on Fri., Apr. 9th, and stayed till about 10:00 to see two stars for a total of six seconds. (But wasn't it fun just being together, cloudy skies or not?) While the clouds were doing their "Lagoon

Nebula" impersonations and **Tom Moore** was blissfully ignoring child labor laws, we looked at the used 10" Orion DSE that **David Ward** was trying out on loan for 2 wks. (He later bought a new Meade 5" reflector.)

FRAC was well represented at the Peach State Star Gaze on Apr. 15-18, with at least 15 members in attendance: **Tim Astin, Joanne Cirincione, Robert Hall, Larry Higgins, Joe & Cody Hinton, Rich Jakiel, Katie & Tom Moore, Dan Pillatzki, Art Russell, Dr. Richard Schmude, Smitty, David Ward & yrs. truly.** Katie M. found 35 Messiers; her father Tom managed, after hours of intensive, relentless star-hopping, to find the restrooms.

It was nice to see **John Wallace, Mike & Danielle Stuart, Tim Astin, Tom & Katie Moore,** and **David Ward** at the Apr. 23rd Beaverbrook Chicken-Cue. A waxing gibbous Moon and incredibly light-polluted conditions severely limited what we could show the BB folks. but we had a good time anyway.

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Membership Renewals Due in May: David, Patti, Joe & Chad Pendergrast; and Neal, Cody & Suzy Wellons. Send your \$10 checks to **Ken Walburn** at the address listed on p. 1.

In case you didn't know, our FRAC membership is dated from the first day of the month in which you received your first newsletter, and expires one year from that date, with an additional 4- or 5-week grace period for late payment that ends on the date of the following month's club meeting; paying by then will keep you happily ensconced on our membership rolls.

If you forget when your membership expires, there are 3 ways you can find out: by checking the membership list (revised copies were given out at the April meeting); by reading the "Membership Renewals Due" section of each month's newsletter; or by calling **Bill Warren, Ken Walburn** or **Neal Wellons**, all of whose phone nos. are listed in each issue of the *Observer*. (Of course, you could also find out simply by ignoring those alternatives and letting your membership run out as it eventually will -- but then you

wouldn't find out what nonsense **Ken Walburn** has been up to during the past month.)

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Upcoming Meetings/Activities. Important announcement! Write it down, or have it tattooed to your forehead! **Our next FRAC meeting will be at 7:30 on Thurs., May 6th -- the 1st Thursday of the month, not the 2nd!** Starting this month, look for the new moon to cause changes in our meeting and/or observing schedules during the next 8 mos. If you don't write down the meeting dates and keep them prominently displayed, you may show up on the wrong Thursday for our meetings! And you *don't* want to miss **Smitty's** talk on solar observing at our May meeting!

Our Beaverbrook/FRAC joint observing will be held the next night. **Fri., May 7th**, at the school, and our Cox Field deep-sky observings on **Fri.-Sat., May 14th-15th**, with the new moon coming on the 15th.

Our June meeting will feature **Neal Wellons's** long-awaited talk on cosmology. In July, **Smitty** will be back on center stage, discussing light pollution and the efforts of organizations such as the International Dark Sky Association to control this growing menace to astronomy. And in August, **yr. muddle-brained reporter** will show you how to organize your search for summer Messiers in *Sagittarius* and elsewhere -- hopefully, without losing a constellation this time around.

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The Sky in May. **Venus**, prominent, bright and high in the W sky, and **Mars** in the SSE highlight this month's planetary viewing. Already bright at mag. -4, Venus is growing larger and brighter as it moves nearer to the Earth; telescopically, it will show slightly more than a half-disk. You'd swear you're looking at a gibbous Moon phase through the wrong end of your telescope.

On **May 7th**, the 8.9-mag. asteroid **8 Ceres** (the "8" means that it was the 8th asteroid to be discovered) will be 0.7° -- slightly more than a

Moon-width -- N of Venus. Don't miss it, especially if, like me, the only asteroid you've seen is **Larry Higgins**.

Mars will shrink and fade as May progresses, but at mag. -1.1 it will still be a very easy target in the neighborhood of mag. 1 **Spica**, the brightest star in *Virgo*. An article on p. 106 of the April issue of *S&T* tells which surface features we're most likely to see. The Red Planet will continue to grow smaller over the next two months.

The annual **Eta Aquarids meteor shower** -- dusty debris from **Halley's Comet** -- will peak on **May 5th-6th**. Unfortunately, though, this reliable stream will be hampered by a waning gibbous Moon and the fact that the shower tends to peak just before dawn. *Sky & Tel* suggests waiting until **May 10th**, when the Moon is a much slimmer crescent, to view the Eta Aquarids' "secondary shower peak." Eta Aquarids meteors "often leave long-lasting trails." (p. 110)

If you can locate the bright (9th-mag.) spiral galaxy *NGC 2903*, 1-1/2° S of 4th-mag. *Lambda (λ) Leonis* -- and any decent set of star charts will show them -- you can also find asteroid **4 Vesta**. On **May 23rd**, Vesta will be 30' S of *Lambda Leonis* in the same field of view. At mag. 7.8, Vesta will be visible even in small telescopes. (*Lambda Leonis* lies directly W of 4th-mag. *Epsilon (ε) Leonis* at the NW end of the curving line of stars that forms Leo's head and mane.)

May is an excellent month to observe *NGC 5139 (Omega Centauri)*, the globular cluster that is so bright that it was originally thought to be a star by naked-eye observers, hence, its name. Faintly visible to the naked eye to southerly observers as a 5th-mag. fuzzy star, Omega Centauri appears as a hazy patch in binoculars and as a bold scattering of stars in a telescope. You'll find it at Cox Field about 5°-10° above the trees to the S in the constellation *Centaurus*. It's best seen late in the evening after the lights of Zebulon and Concord have dimmed for the evening.

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Congratulations... First, to **Larry Higgins**

for getting back his 10" Dob (autographed by John Dobson himself) after about a year's absence. Second, to **Rich Jakiel**, whose article "Spirals and Giants and Dwarfs Oh My!" (co-written with Steve Gottlieb) appears in the May '99 issue of *Astronomy* on pp. 78-83. Third, to **Dr. Richard Schmude**, a featured speaker at the PSSG. And finally, to **Tim Astin, John Wallace** and **yr. humble reporter** for earning pins & certificates in the Lunar, Messier and Herschel 400 observing clubs, respectively.

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Who's Afraid of the Big, Bad Herschels?

article by **Bill Warren**

Having spent much of the past 21 months complaining about how difficult the Herschel 400 Club objects are to find and observe, I've probably succeeded in scaring many of you away from starting your own Herschel searches; in doing so, I've done you a grave disservice. The search for the Herschels is a wonderful challenge for anyone who possesses the search skills to earn a Messier pin.

Many of the Herschels are faint fuzzies -- but not *all* of them are, far from it. No less than 122 of the targets --30% of them -- are mag. 9.5 or brighter, and therefore well within range of telescopes far smaller than most of you are using in your search for Messiers. In fact, 15 of the Herschels *are* Messiers: **M20** (Trifid Nebula), **M33** (Pinwheel Galaxy), **M47, M48, M61, M76** (The Little Dumbbell), **M82, M91, M102, M104** (Sombrero Galaxy), **M105, M106, M107, M108** and **M109**.

Anyway, many of you have already seen a number of Herschels besides the Messiers listed above, although you may not have known that they were Herschels. **NGC's 869 & 884** -- the Double Cluster in *Perseus* -- are Herschels. So are: **NGC 2264** (the Christmas Tree Cluster) in *Monoceros*; **NGC 2362**, the Christmas tree look-alike open cluster surrounding the 4th-mag. star *Tau* (τ) *CMa*; the little planetary nebula **NGC 2438**, located inside open cluster *M46* in *Puppis*; **NGC 2169**,

the "37" asterism in *Orion*; **NGC 6826** (the "Blinking Planetary" nebula) in *Cygnus*; **NGC 5195**, the bright-cored companion galaxy to *M51* (Whirlpool Galaxy) in *Canes Venatici*; **NGC 7009** ("Saturn [planetary] Nebula") in *Aquarius*; **NGC 2392** (the Clown Face, or Eskimo, Nebula) in *Gemini*; open cluster **NGC 1502** (Kemble's Cascade) in *Camelopardalis*; **NGC 3628**, an edge-on spiral galaxy in the same field of view as M65/M66 in *Leo*; cloud-like open cluster **NGC 2158** in the same field of view as the bright open cluster **M35** in *Gemini*; planetary nebulae **NGC 7662** (the Blue Snowball) in *Andromeda* and **NGC 3242** (the Ghost of Jupiter) in *Hydra*; and **NGC 7000** (North America Nebula) in *Cygnus*. If you haven't seen these objects yet -- and even if you aren't collecting Herschels -- you should find and observe them in their appropriate seasons. Each of them is, in its own right, both fascinating and lovely, as are many other Herschel objects.

The Herschels are challenging, all right -- but the true challenge they represent is to extend your searching and observing skills beyond those necessary to capture the Messiers. The search for Herschels will take you to constellations that you may not have been previously familiar with -- constellations such as *Aries, Camelopardalis, Canis Minor, Cepheus, Cetus, Crater, Delphinus, Eridanus, Lacerta, Leo Minor, Libra, Lynx, Pyxis, Sculptor* and *Sextans*. Awareness of how those constellations fit into the overall scheme of things will enhance your familiarity with the night sky.

Beyond that, the Herschels will teach you a thing or two about celestial sizes that you may not have known before. Can you recognize a length of, say, two, five or ten arc minutes? You'll be able to after about 1/4 of your foray into the world of the Herschel 400s. And *that* will help to make you a more effective astronomer.

So. Here's what I propose -- and what **Smitty** proposed in his "President's Message" this month: **If you aren't already doing so, get yourself an observing notebook and start writing down your observations of everything you observe.** Use whatever format

you like -- the Messier format is fine but others will do -- but *start recording those random observations you make, even if they don't fit into an observing program you're presently pursuing.*

If you do that, you may already have a head start whenever you enter a given program. For example, if you've seen and recorded observations for all -- or even some -- of the 31 objects cited earlier in this article, you're already well on your way in the hunt for Herschels. And if you take it easy, plan ahead and look for the brighter Herschels in each season, you should be able to knock out about 240 of them without working any harder than you did in chasing down the Messiers.

By the time you reach the point where you think you might like to go for the rest, you'll have the search skills to find them. And by the time you finish your Messier list, you need to think about purchasing a *Sky Atlas 2000*, which has all 400 Herschels -- but until then you can get by easily with the *Cambridge Star Atlas* (which has about 270 of the Herschels) and Wil Tirion's *Deep Map 600* (which has at least 200 of the Herschels).

The Lunatix Challenge Series: #3

by Philip Sacco (Lunatic #82)

(Editor's Note: This is the 3rd in a series of 12 monthly "Challenges" devised by AAC's Phil Sacco to make your Lunar Club award quest more interesting. Remember: if you miss a given feature one month, you can always look for it next month.)

Naked-Eye Targets. 1. *Man in the Moon*; 2. *Mare Imbrium*: What is its English name? 3. Crater *Copernicus*: Why is Copernicus so easy to see? 4. (Challenge) *Mare Vaporum*: Sea of

Author's Note: Now that you've had time to warm up to the Lunatix challenge, I'd like to introduce you to the consummate Lunatix hunt, a selection of 12 objects selected and rated by Harvard astronomer **Edward Pickering** (1846-1919). The objects range in difficulty from 1 (easiest) to 12 (hardest). Pickering's list will be interspersed throughout the remainder of the challenges. Here's your first taste of them:

Pickering's Naked-Eye Challenge.

Can you see: 1. The bright areas around the craters *Kepler* (rated 4) and *Copernicus* (rated 1)? 2. The dark spot at the foot of the *Apennines Mountain Range* (rated 11)?

Binocular Targets. 1. Crater *Plato*: Is this a young crater? 2. *Montes Apennines*: What seas do this mountain range separate? 3. Crater *Ptolemaeus*; 4. (Challenge) Crater *Eudorus*: What mountain range is nearby? 5. *Palus Epidemiarum*: What does its name mean?

Telescopic Targets. 1. Crater *Posidonius*. 2. *Rima Posidonius*; 3. Crater *Davy*: Since 1994, what nearby feature has become better known? 4. *Promontorium Agarum*: What does its name mean? 5. (Challenge) *Catena Davy*: What is a catena? (No, it's not where a Mexican buys a beer!)

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