

WEB PAGE OF THE Month



Notes from a Visitor Continued

threatened with the building of the Visitor's Center. Well, those nights have indeed changed, and in my opinion changed for the better.

There is a great staff running The Center of the Universe, and the job they are doing is fantastic. How on Earth (pun intended) could anyone not be enthused about Astronomy after meeting them?

So... did I miss being there on the hill that night "naked" without my telescope?

Put it this way: Even with a gibbous moon, some clouds, turbulence like crazy, and no telescope, my "seeing" was great!

What a gratifying and extremely rewarding experience it was.

I strongly urge all regulars to park their equipment for a night, and take in what the Center of The Universe really has to offer. You won't be disappointed if you do.

Chuck

Skynews



September 2002

Number 237

<http://victoria.tc.ca/~rasc/>

This Month

September 11, 2002

**Members' Night:
RASCals' contributions to the on-going search
for truth, the universe, and everything fun.**

Annual General Meeting

Run for cover! We still need a Recorder. We'll need a new President and our Treasurer would like to move on. Volunteer—you'll have a job that's not difficult and, when we ask for volunteers for other tasks, you can quite smugly say that you are already doing something important.

Sandy Barta

Address Change? Information Incorrect?

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Notes from a Visitor

As a regular Saturday nighter up to the Dominion Astrophysical Observatory, it was a somewhat difficult decision for me to elect not to bring my telescope to the hill on Saturday, June 22/02. It had been a tough week, so I figured I would be calling it an early night, only staying for an hour or two.

So there I was, driving up the hill, feeling a bit like a fish out of water without my equipment. Briefly thought about turning back, but what a mistake that would have been.

With encouraging words from Scott Mair and Ed Maxfield when I got out of my truck, I was to become a visitor for the night. And what a treat it was, too!

First I attended Julie Bolduc-Duval's lecture "View from the Blue Planet", and it was absolutely splendid! Julie has a way of having you leave the theater knowing she cares personally what happens to our environment.

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This Month

Every
CLEAR
Friday

Astronomy Café

At Sandy Barta's, 2949 Michelson Road,
Sooke, BC
Call 642-0205 for more information or
directions.

And you **WILL** need directions!

The Astronomy Café is an astronomical
conflab and if it's clear (and we are willing
to give up our comfy chairs) we observe
under an unbelievably dark sky.

Newcomers are most welcome.

Come and enjoy!

Please :

**Call or check our website to find out
if it's likely to be clear.**

Sept
27

**New Observer's Group
At Sid Sidhu's:**

1642 Davies Road (off Millstream Lake
Road) at 8:00 PM.
Call 391-0540 for more information or
directions

Sept
25

Council Meeting

Uvic Astronomy Lounge
7:30 PM

Notes from a Visitor Continued

Later, I went to the dome, and listened to Don Enright's fantastic history lesson of the Plaskett telescope's construction and operation. Don enthusiastically spoke as if he had actually been there to witness it being constructed.

Heading back to my usual haunt in the parking lot, I heard Scott instructing a group of kids on how to act like a pro, and to not touch the telescopes when they go to look through them. Boy, are we ever grateful for that info being passed around!

By this time I was rather enjoying not being "on" behind my equipment for the night; not having to wonder who would kick my tripod next, or who would be the first to layer the eyepiece with mascara.

I continued to wander around and it was great!

I spent an enjoyable time chatting with Guy Walton, David Lee, Bruno Quenneville and several others.

Sid Sidhu and I had an arduous time trying to find Hercules well before dark (M13 addiction), and I had good views through Chris Gainer's ETX (felt him get a little frustrated with the telescope's "go to" function – we've been there).

I also managed to steer myself into an rather intriguing discussion with a fellow visitor, who believes the contrails seen in the sky almost daily are more sinister than just commercial jet trails. This last one was just a little hard for Rich Willis to take of course, hearing someone actually agree with my theory that Base 51 has something to do with it all (don't breathe deep Rich, just phone Art Bell).

Some point in the evening I guess I looked like I needed a fix, for Sandy Barta graciously let me monitor her telescope for a few moments, after which I continued on and enjoyed the rest of the night thoroughly.

The highlight was later learning how to image through the Plaskett telescope.

Even just being able to hold the paddle and control the telescope, was something that dreams are made of. I couldn't help thinking when I was moving the Plaskett, watching the stars appear through the top of the dome as it turned, just how it must have been when astronomers did their first observations long ago in that very building.

It was almost like being transported back in time.

When I stood outside later, I was still awed, and passing by the offices on my way down the hill I thought of the work Jim Hesser and other astronomers are doing now, and how it all ties in with the past. To be truthful, the feeling that night was humbling.

That brings me to another point. I remember about two years ago discussing with David Lee my concerns that our casual nights on the hill might be

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President's Message

It was quite the summer filled with adventure and misadventure. While hiking through East Sooke Park this long weekend I realized how fall is upon us. The trees are already starting to change colour. The night skies have been changing too. The Double Cluster in Perseus is in view before 11 o'clock at night, one of my all time favourites.

Historically late August and early September are some of the best observing times of the year. The last few Friday nights at Sandy's dark site in Sooke confirm this. The advantages of a dark site cannot be overstated. I remember some beautiful views through Guy Walton's award winning Dobsonian in late August. Views of globular clusters take on a three dimensional quality which is often lost in city viewing.

Fortunately all is not lost while living in the city. I've seen some beautiful conjunctions this summer, one of Venus and the Crescent Moon on the eve of the Perseid meteor showers. Moonrises still hold a fascination for me. I recall the one I saw recently over the ocean during a Crescent Moon tour, a brilliant orange ball against a powder blue sky.

David Lee

Cover

Venus and Crescent Moon

It was a balmy night on the breakwater. A wonderful conjunction of Venus and the Crescent Moon.

Location: Odgen Point, Victoria, BC, Canada
Camera: Nikon Coolpix 950
Date and Time: 2002:08:11 21:19:36 PDT
Exposure: 1.00s at F3.6
Sensitivity: ISO 100 equivalent

Photo by David Lee

The deadline for the next issue of *Skynews* is

September 27 2002

ATTENTION READERS!

Get your *Skynews* early and in colour. Tell Laura, our Treasurer, that you get *Skynews* on line and we won't mail you a copy.

The Night Sky

It's time to coast through another equinox—and it's time to gather observing resources and squirrel them away for those cloudy nights. Be sure to purchase the 2003 magazine annuals before they disappear from the newsstands. The annuals have pretty pictures, telescope and equipment reviews, 'how to get started' articles, and (best of all) the sky month-by-month. Add the resources presented by hard-working RASC volunteers in the *Observer's Handbook*, and you're set! We awarded one Messier certificate last year and hope to be able to issue many more.

SEPTEMBER 1 to SEPTEMBER 7

The summer triangle soars in the early evening sky. Get out early enough and you'll watch it appear like summer magic in the sky. That bright star directly overhead is Vega, one of our close neighbours at 25 light years away. You'll likely notice Altair (in Aquila) next. This star is even closer at 16 light years away. The last star in the summer triangle, Deneb, lies about 1600 light-years away from us. Picture just how much bigger and brighter it is than the other summer triangle stars.

Over in the west, bright Arcturus stands out in the dusk. This luminous object is 37 light years away. Note how you found it—you'll use this star to find Mercury in late October.

Glance to the north and you'll see another bright star. Capella brings autumn; its position low in the northeast and foretells winter. This bright object is only 42 light years away.

Neptune and Uranus reside on opposite sides of Capricornus. Find a monthly sky chart and note the star patterns around each planet. Can you find Neptune with binoculars? The light from this distant giant takes about four hours to travel to your eyes. Try for Uranus next; that light took "only" about 2 1/2 hours to reach your eyes. Now that you've found it, can you spot Uranus without binoculars or a scope?

SEPTEMBER 8 to SEPTEMBER 14

Think you're really sharp? Try finding bright Mercury low in the dusk this week. No luck? At least you enjoyed a thin crescent moon joining Venus on the 8th and 9th.

Now test your skills and find a couple of asteroids (don't give up right away—you'll have weeks to hunt). Ceres and Melpomene should be fairly easy to find in Cetus. Again, check a chart, sketch the star field you see in your binoculars or scope over a few nights, and compare sketches—the 'star' that moved is the

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The ETX Continued

The second section is made up largely of questions and answers. While parts of this section cover matters such as varying sky quality, much of it deals with what is best described as advanced troubleshooting. Reading this section helped me deal with some strange behaviour in my telescope that probably stemmed from a common error made while setting it up for the first time. And this section also contains a useful set of seasonal sky maps with common guide stars.

But there are a number of deficiencies with the book. First, it is necessary to always have the rather small ETX instruction booklet from Meade handy because the book does not contain a schematic of the telescope's parts nor of the possible commands for Autostar.

I also found that a lot of information that I would have put in a book for ETX users is not there. For example, a "how to" guide for downloading Autostar updates would have been most helpful.

This book is very useful for someone who has just started off in astronomy with an ETX. As the author writes, this book is good for helping newcomers set realistic expectations for their new telescope. For people who have more experience in astronomy, this book is less useful. The Mighty ETX website is still the place to go, since it has the equivalent of thousands of pages of tips.

As for the ETX itself, it offers great value, but it still requires a certain amount of skill and patience to operate.

Newer Go To telescopes with Global Positioning System connections represent the latest advance in this field, and the day is probably not far off when one will be able to set up a Go To telescope on a suitable platform, and Go To without any preliminaries.

Until then, those of us with ETXs will need help to find our way about the cosmos.

Chris Gainor
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<http://www.islandnet.com/~cgainor/cg.html>

Saturn Project

There's no excuse for not observing Saturn in the morning now. It's high in the sky before dawn, ripe for noting (1) the brightness of its ring system now that the rings are opening to maximum, (2) the brightness of Saturn's surface bands.

These two observations are part of the 2002 Saturn Study and I ask observers to send in observation forms for this study. Forms are on pages 9 and 10 of the Hamilton Centre's March 2002 Orbit.

MJ Spicer

<http://homepages.interscape.net/homeroom/rascsite/rascfiles/orbit.htm>

The ETX gets its own book

Review by Chris Gainor

Mike Weasner, *Using the Meade ETX: 100 Objects You Can Really See with the Mighty ETX*. Springer, 2002.

If there's an instrument that symbolizes "Go To" telescopes, it must be the Meade ETX. This Maksutov-Cassegrain first hit the market in 90 mm aperture in 1996, and now it is available in 125 mm, 60 mm and 70 mm sizes, the latter two being refractors.

These telescopes, especially the 90 mm and 125 mm equipped with Meade's Autostar guiding system, have become best sellers with astronomers and wannabe astronomers looking for an inexpensive, easy and portable telescope.

One of the first to get an ETX was Mike Weasner of California, and his enthusiasm for the telescope caused him to set up the Mighty ETX website (<http://www.weasner.com/etx>), which is full of indispensable information for anyone who uses an ETX.

Last year I returned to observing after a long hiatus when I purchased a 90mm ETX with Autostar. I will confess that I've never enjoyed searching for anything, be they my glasses or a distant galaxy. The idea that the ETX would spare me this drudgery was enough to pull me out of my armchair and onto the observing platform.

I immediately found out that even using a Go To telescope requires a certain amount of skill and familiarity with the sky.

Before the ETX can Go To, it must be aligned using two stars, and the observer must verify those stars. The first star Autostar picked for my very first alignment was Alioth, which I later found out was in the handle of the Big Dipper. Months later, I now know where the Autostar's favourite alignment stars are located.

When other questions came up, I turned to Weasner's website, which has been an invaluable resource. Now Weasner has produced a book that sums up the wisdom contained in the website.

"Using the Meade ETX" is divided into two sections of about 100 pages each, the first covering the basics of ETX design and use, and the basics of astronomy for someone who has just started astronomy with their ETX purchase. The second half is a lengthy question-and-answer section that covers relatively advanced ETX questions.

The first section is very useful for anyone starting in astronomy with a new instrument, especially if that instrument is an ETX. It contains information on how to get the telescope going, and what to look for, as the book's subtitle implies. There are even tips for budding astrophotographers.

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The Night Sky Continued

asteroid. I'll publish your sketch for all to enjoy. Or, why don't you make this your first stab at imaging? Images taken a few hours apart will betray the asteroid.

SEPTEMBER 15 to SEPTEMBER 21

Don't miss out on the up coming "giant planet season". Right now, Saturn is about 9 astronomical units away and Jupiter is about 6 astronomical units away. Saturn and Jupiter grow in size as we overtake them in our faster, inner orbit. Saturn rises about midnight with Jupiter following about three hours later. Saturn **always** wows first-time telescope viewers and the view will just get better as we draw closer to it. And don't forget to play 'name that moon' when you look at Jupiter. You can play that game with Saturn, but who ever looks away from the rings? Pay attention to Saturn's path across the stars. Which way is Saturn moving?

By the way—tell David how many times the Earth travels around the sun in one Jupiter-year and he'll give you a prize.

Venus sinks lower and lower in the west so our turbulent atmosphere interferes with telescope views of her crescent apparition.

Have a few friends over to watch the Harvest Moon rise on one of the evenings around the full moon (September 21). Tell David what makes this moon rise at about the same time at this time of the year.

SEPTEMBER 22 to SEPTEMBER 28

Autumn.

And Venus celebrates in her finest—she marks the occasion as a magnitude -4.6 crescent. Venus is bright despite the tiny sun-lit area because the planet is only half an astronomical unit away (an astronomical unit is the distance between the Earth and the sun). How long does it take light to travel from Venus to Earth? How long does it take light to travel from the sun to Venus and on to Earth?

The moon leaps over Saturn on September 28th. Watching this is way better than watching a cow leap over the moon. But don't linger on the distant planet, rather take a tour along the terminator of our companion world. Terminator? That's the word for the line where lunar day rubs shoulders with the lunar night. It's this region that reveals the most detail because shadows are long and throw features into high relief. Let's see those sketches.

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The Night Sky Continued

SEPTEMBER 29 to OCTOBER 5

Mars glows dimly in the day's morning glow. Look below Mars in the dawn on the 5th for a celestial treat—the moon and Mercury hang below Mars.

Skies should be steady, so make sure you stay up late to enjoy the last of the clear weather. Drag your binoculars out and find M33 (one of the galaxies known as the 'Pinwheel') and M31 (the Andromeda Galaxy). Bask in photons that have traveled for almost 2.5 million light years. Both galaxies are spirals, but M33 shows us its full disk and M33 tilts nearly edge-on. M31 is easy to find: use the top, right "V" of Cassiopeia as a pointer to the galaxy. You can also climb up from Andromeda's middle, bright star Mirach (beta) to mu, then nu. (Okay, okay, don't say it!). It's worth identifying these stars because they'll help you find M33. Follow their arc down to alpha Triangulum (the star at the pointy end of the triangle of bright stars below Andromeda). M33 is about 2/3 of the way to alpha. How come M33 is so faint?

OCTOBER 6 to OCTOBER 12

A crescent moon hovers over Venus in the dusk on the 8th. By the end of the month, Venus abandons the dusk to hide in the daytime sky. She is at 'inferior conjunction' (meaning that the planet is between the sun and our planet) with the sun at the end of the month.

Are you still paying attention to Saturn? You may notice something strange about its movement across the sky. Saturn stands still on the 11th and begins to move westward across the stars. We call this 'retrograde' motion.

Keep an eye out for Zodiacal light in the morning. Zodiacal light is sunlight reflecting off the dust in-between Earth and the sun. You've got about two weeks to spot this reminder that our planet resides in a dusty system.

OCTOBER 13 to OCTOBER 19

The moon 'visits' Neptune on the 14 and Uranus on the 16. There doesn't seem to be much else to look at in this area of the sky. Capricornus, Aquarius, Pegasus, Pisces and Cetus don't offer many temptations—or do they? Ever wonder about that bright star all by itself? That's Fomalhaut (Fish Mouth) a mere 25 light years away in Piscis Austrinus. Fomalhaut emits about 17 times as much light as our sun but isn't quite twice the sun's size. You are looking at a young star surrounded by a dusty ring that may contain forming planets. Take a quick look at Vega—Vega also has a dusty disk. Look back towards Fomalhaut,

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Mount Kobau Star Party 2002 Continued

I took along a new telescope that I built in about a week. I was very lucky to get a 300mm mirror from Ed Maxfield. It turns out that Robert Deane ground and polished this mirror 42 years ago when he was living in England. I decided to fashion an open truss Dobsonian. I went through the Internet and "Sky and Telescope" to get ideas. I was impressed by author Gary Seronik's 8" travel scope. Gary is associate editor of the magazine and a speaker at this event. The criteria for my scope would mean the when disassembled it would fit in my car. The spider cage would slip into the mirror box and the mirror box would stay on the rocker box producing a package of about 24" square. I sketched a few ideas and devised a novel way of mounting the collapsible truss (like our folding chairs from china) to both the spider cage and the mirror box. I did not have "The Dobsonian Telescope" by Kriege and Berry to confuse and jade my design - simple was the theme! What evolved is a beautiful telescope. I am so impressed. It can resolve the 'double-double' Epsilon Lyra with absolute separation and clarity, the veil nebula (O III filter) is breathtaking, M81/82 with NGC 3077 is a memorable sight and M13 is a huge burst of hundreds and thousands of sparkling diamonds. Such beauty and glory are the rewards of this hobby. What a perfect scope for the star party.

The nights were clear and the sky was dark. The Milky Way was so bright that one could almost reach out and touch it. A look through binoculars rivalled the fine composite photos we all see. What seeing, what views - this is what we all came for.

I met another person named 'Guy' on Friday when I went to register my telescope in the Dobsonian category of the scope making contest. He was Guy Mackie. Entering this telescope was crazy as it is a naive creation that shuns the tradition of the masters - Kriege and Berry. Tonights seeing was clear but windy. I left my scope for a few minutes to get something and heard a big CRASH! The wind had caught the scope and blew it over, breaking a new reticle eyepiece on the finder - Ugh! That was it! I packed it away and used my rich-field 4" refractor. I had a lot of fun. The images in it were bright and crisp but much smaller.

Saturday the judges viewed my telescope at noon. Gary Wolanski, one of the judges made mention that he had written an article on the use of counterbalancing with virtual springs, like the ones I had installed. His article did not flatter them but he felt mine were O.K. Also, my mirror was secured to a plywood cell with silicone and he felt it might fall off in time. A negative response from the judges is not good but you know what; at the reception I was awarded the Dobsonian Award! This telescope had impressed the judges - who are great telescope builders.

Guy Walton

Laughing and Grief – Part 1 Continued

The genitive of Juppiter (which is how Jupiter is spelled in Latin) is the very irregular Jovis ("of Jupiter"). Hence the adjective "jovian", as in "jovian satellites".

The genitive of Venus is Veneris, and in principle, "venusian" is not correct for the adjective, any more than "marsian" or "jupiterian" would be. "Venereal" has a rather different meaning and is not used in astronomy. The Greek version "Cytherean" has been advocated from time to time, but it does not seem to have stuck. I see nothing wrong with "venerian", but I have never come across it, and most people today are happy to stick to "venusian".

So much for the genitive case – but our need for Latin in astronomy is by no means over. I recently read that there are several sorts of meteoric phenomenae – which reminded me that, not only do we need to understand the genitive case, but we also need to understand how to form plurals, and what is Latin and what is Greek. "Phenomenae" just won't do! Wait for the next exciting part of this article in your next issue of *SkyNews!*

Jeremy B. Tatum

**Mount Kobau Star Party 2002
August 3 - 11**

The gathering was to start on August 3 but satellite weather maps on the Internet kept me at home until Tuesday August 6. In spite of rain I decided to go. The weather started clearing as I neared Princeton. When I arrived on the top of Kobau I was greeted by cold, windy, and cloudy weather that convinced me to head to Osoyoos and get a motel room. Halfway down the mountain I stopped, turned around and went back to register. This was not the spirit as I came here for better or worse and to have a good time.

I set my tent up at the very top by the tower. I went around to meet my neighbours and their nice scopes. One fellow from Calgary had a beautiful 16" Newtonian on a fork mount. What a dream scope! Another fellow had crafted a 10" Newtonian on a split ring mount. I was so impressed I took photos of them.

The skies cleared that night and the weather improved as the week progressed. Brian Robilliard arrived the next day with his wife Joanne and their little daughter. I met John McKee from Comox and Paul Greenhalgh from the Fraser Valley Astro Society. Gary Wolanski, the developer of the all aluminium Ultra-lite Dobsonian, talked on telescope making and demonstrated an easy method of cutting large drive gears in 1/8" aluminium. Living at the top of the mountain made me rather lazy to attend other talks as the walk back up was a little too ambitious for my relaxed holiday spirit.

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The Night Sky Continued

take you mind off these close-by stars and look deeper. You are looking 'below' our galaxy's dusty, noisy metropolis into deep space.

Are you still testing your ability to see Algol's changes? The Handbook's monthly calendar tells you when Algol is at minimum brightness. Here's something to make this star even more interesting: Alan Batten writes in the Handbook that seven million years ago, Algol may have been within 17 light years of our star and would have been brighter than Sirius is now. Cool!

OCTOBER 20 to OCTOBER 26

We call this month's moon the Hunter's Moon and, like the Harvest Moon, it seems to hang in the evening sky forever. Summer's birds (Cygnus, Aquila and Lyra—hawk or vulture) head south. There's no avoiding the coming winter solstice...brrrr!

Orionid meteors shower on the 22nd but the moon steals the show. The Orionid showers us with debris from Comet Halley. Check out www.namnmeteors.org and www.amsmeteors.org. And read the section in our Handbook—its only two pages long and full of surprising information. Then move on and read some of the other meteor articles. There's even a table listing our continent's impact sites and a map showing the major impacts.

That bright star to Jupiter's right is magnitude -1.4 Sirius. Compare planet shine with star shine and estimate Jupiter's magnitude.

Mars is still a pathetic sight. But, why don't you try tracking its path in the sky? This would even make a great winter project for kids.

OCTOBER 27 to NOVEMBER 2

Still having a difficult time trying to spot Mercury? Wake up early (or stay up till 4 AM) on the 27th—Mercury soars north of Spica. Follow the arc of the Big Dipper's handle to Arcturus and speed on to Spica.

Still no luck finding Mercury? Look back at the Big Dipper and we'll explore. Thuban lies almost half way between the Little Dipper's bowl and Mizar, the middle star in the Big Dipper's handle. Tell David what's so special about Thuban. The sparse stars you see are about 80 to 500 light years away. Haul your scope out and look beyond these stars out into deep space. Locate the Big Dipper's bowl and jump from Phecda to Dubhe and then an equal distance in the same direction. The pair of galaxies we designated M81 and M82 cling to the edge of the field of view at 80 times in your 150mm telescope. You'll be able to spot M81 in binoculars. Take a deep breath, you've collected light that's taken 11 million years to reach your retina. Now plunge even deeper. Look back to the

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The Night Sky Continued

Megrez and Alioth and move your eye towards a region a sky where you might place the right angle of a triangle. This is the part of the sky imaged for the Hubble Deep Field.

Our view from our night sky window is turning away from the inner milky way and towards the outer spiral arms. Check out winter star charts and start plotting your way through Orion's dusty robes. Sure, you like to track down those faint, challenging objects but face it, you're like a kid in a candy store when it comes to Orion's nebula.

Lat Long & Poles

Want to know your home latitude and longitude? Check the hydro pole nearest your house. Locate a small metal plate—the top line of numbers provides the answer. The first four numbers are your longitude and the next four are your latitude. For example, you'll see: 2322 4826 3011. Read it as: 123°22' W, 48°25'N. Note that our longitude is 123° - the '1' is omitted. The last four numbers (3011) refers to the BC Hydro pole location map.

Laughing and Grief – Part 1

In case you are wondering about the title of this article, I'll just remind you, in case you have forgotten, of the Mock Turtle in *Alice's Adventures in Wonderland*, who told Alice that, in schools under the sea, pupils were taught subjects such as Reeling and Writhing, Fainting in Coils, and Laughing and Grief.

I hated being made to learn Latin at school, and I was bored beyond description at being forced to translate such unexciting sentences as "On account of fortifications of greater height, we can resist the enemy better." I so rebelled against enforced Latin that I defaced the title of my Latin Book:

**A SHORTER
LATIN
PRIMER**

so that it read

**A SHORTBREAD
EATING
PRIMER**

"I'm going to be an astronomer", I said. "What possible use could I have for learning a long-dead language?" The teacher was unsympathetic and told me that one day, if I grew up, I would be grateful that I had been made to learn Latin when I was a schoolboy. And the crowning insult, which caught up with me only many years later, was that the teacher was *right*, and I *am* grateful. Don't you just hate people who are always right?

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Laughing and Grief – Part 1 Continued

So how could it possibly have turned out that I, as an astronomer, did in fact have a need for Latin after all? As it happens, I have had more reason to be grateful to my Latin teacher than even he might have imagined.

Example: I keep hearing the star Betelgeuse referred to as "Alpha Orion", or Vega as "Alpha Lyra", or I am told that someone is observing the variable star "R Virgo". These are quite wrong, and I find myself quite irritated when I hear such faulty Latin. (Come to think of it, perhaps I shouldn't be all that grateful for having had Latin thrust down my unwilling throat after all. If I didn't know that "Alpha Orion" was wrong and was bad Latin, I wouldn't be irritated by it and would consequently be a happier man.) Those of you who remember your *Alice* will recall that Alice had some idea of how to decline Latin nouns, for she had seen in her brother's Latin Grammar: "A mouse – of a mouse – to a mouse – O mouse!" These have to be rendered in Latin: "mus – muris – muri – mure!", which are, respectively, the nominative, genitive, dative and vocative cases of the noun *mus*. Alice knew that she had to address the mouse in the vocative case, so she opened the conversation with "O Mouse!" Likewise, Julius Caesar (who was pronounced by my Latin teacher "Yulius Kysar"), even when mortally wounded with multiple stab wounds, remembered to use the vocative case in addressing Brutus: "Et tu, Brute!"

Let us come back to Betelgeuse. It bears the Greek letter designation Alpha of the constellation Orion. Therefore Alpha must be followed by the *genitive case* of Orion, which is Orionis. Thus Betelgeuse is Alpha Orionis. Likewise the genitive cases of Lyra and of Virgo are, respectively, Lyrae and Virginis, so that Vega is Alpha Lyrae and Spica is Alpha Virginis.

So, how do we know how to form the genitive case of a noun? One way is to work your way through my *Shortbread-eating Primer*, chapter by chapter, noun by noun. A much easier way is merely to refer to your RASC Handbook or to Norton's Star Atlas, where the nominative and genitive cases of all 88 constellations are given. So, from now on, remember that Cor Caroli is not Alpha Canes Venatici, but is Alpha Canum Venaticorum. And Alpha Herculis is not a mis-spelling (over-zealous copy-editors, please note!). Herculis ("of Hercules") is the genitive of Hercules.

Knowing about the genitive case of nouns is important not only for constellations, but also for planets. For example, the genitive of Mars is Martis (i.e. "of Mars"). Thus we obtain the adjective "martian", as in "martian canals". (In the martian context, the so-called "canals" came not from Latin, but from Italian [one canale, two canali]. The Italian word "canali" can indeed mean "canals", but it can also mean merely "channels", with no artificial connotation.)

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