

FOCUS

DELAWARE ASTRONOMICAL SOCIETY

Next Meeting: Tuesday, March 18, 2008
8:00 pm, Mt. Cuba Astronomical Observatory
Long-term Survival of Life Forms in Space
Dr. Russell Vreeland, West Chester State University

Vol. 53 No. 3, March, 2008

ABOUT THIS MONTH'S PROGRAM: Going where no MAN has gone before: microbial space craft abound. -- preview by Dr. Russ Vreeland

When most people think of ancient life they picture fossils, ancient bones where all of the biological material has been replaced by minerals so only the shapes remain. However, modern science has begun turning that view upside down and inside out. During the last few years molecules such as protein, DNA and even live microbes have been found inside extremely old geologic material. The oldest such discoveries range from apparent muscle tissue inside the 350 million year old skull of an extinct fish to finding living microbes in 125 and 250 million year old halite (table salt). These findings (especially the live microbes) have direct impact for astronomy since numerous meteorites contain water bearing salt rock and since the time periods through which these organisms survive are sufficient for interstellar transport to occur. This talk will be presented by the microbiologist responsible for the isolation of the microbes from salt crystals. It will trace some of these important Earthly discoveries and discuss the implications of natural transport of such materials across space.

FROM THE PRESIDENT -- Hank Bouchelle

Many thanks to Costas Krikelis, Dave Groski, and Rene VanCaneghem for their interesting and informative talks at the last meeting! We certainly have an abundance of talent and a variety of interests in our group. It is always a

pleasure to see home grown talent do such a wonderful job.

Strange as it may seem, it is not too early to think about next year's DAS programs. We have many busy folks among us, and it is useful to think ahead. Please let any of the Board members know if you have any suggestions for next year, something you would like to hear about, or, especially, a talk or mini-talk you would like to offer. This may include ideas for our May dinner speaker for the coming year. I am hoping at this month's Board meeting to schedule a 2008-2009 program meeting for early June. Make your ideas known!

THE ELECTRONIC FOCUS-- Hank Bouchelle

I want to express my appreciation to the overwhelming majority of our DAS members who have expressed willingness to accept The Focus electronically. It has made the jobs of many of our fellow members much easier. It is also my hope that it will make it easier for us to recruit a Publications Chair, whose major responsibility is to prepare The Focus as its editor.

Two items of interest to our members flow from this. The first is that it seems to be time for us to switch completely to an electronic Focus. Bob Mentzer has agreed to send a reminder of the availability of The Focus at the DAS website, complete with a clickable link to it, to all DAS members. Of course, if you do not have Internet access, you need only contact Bob at 764-1926 and let him know that you should receive The

Focus by regular mail. The second is that we are, indeed, looking for a Publications Chair, and hope that someone will step forward to join the Board in that capacity.

MAY AWARDS DINNER -- Lee Kaser

It isn't too soon to make your reservations and put this event on your calendar for May 20, at 6:00 PM for fellowship and 7:00 PM for dinner. The speakers have given very interesting talks for the whole family in past years, and Bob Mentzer is working with Oliver's (formerly the Terrace at Greenhill, now under new management, to provide an excellent dinner. A form for reservations is attached at the end of this FOCUS, so you can print it, fill it out with your entree selections, and send it to Bob at his address given on the form.

NOMINATIONS NEEDED – Hank Bouchelle

This spring brings DAS officer elections for President, Vice-president, Treasurer, and Secretary. While all four current officers will be running as incumbents, we are always interested in competition, and to offer the chance for others to participate.

MCAO PUBLIC NIGHTS – Emil Volcheck

The Mt. Cuba Observatory Public Nights continue year round! In addition to learning about many aspects of the heavens, you'll have a chance to visit and view our all-digital full-dome planetarium! You can pick up a schedule when you next come to a meeting - or get the latest updated version off the website at: <http://mountcuba.org>.

DAS Board of Directors Meeting

Tuesday, March 18, 2008 – Members Invited
7:00 pm, Mt. Cuba Astronomical Observatory

Review of February's Minutes

Treasurer's Report

Standing Committee Reports

Library – Glenn Bentley

Education – Bob Karcha

Sawin Observatory – Tom Sidowski

Observing – Greg Lee

Spring Astronomy Course? – Greg Lee

Scheduling 2008-2009 program planning meeting
(Board members, please bring your calendars)

Finalizing June meeting program

Progress on:

May dinner speaker

Dinner menu
Awards recipients
Publications Chair

DAS MEETING TOPICS, 2007-2008

April 15 -- The Gamma-ray Large Area Space Telescope -- Robert Naeye, NASA

May 20 -- Annual Dinner Meeting
Speaker and location to be announced

June 17 -- Family Night – Mini-Talks (tentative)
February's Lunar Eclipse Shines Through
-- Dr. Wm. D. Hanagan, Jr.

Although the weather forecasts and the dark sky clock predicted that the February 20 total lunar eclipse would not be visible in Delaware, the Alberta clipper that nearly spoiled the event blew threw a little sooner than expected, leaving clear skies just as the eclipse was getting underway.

I photographed the eclipse from the Mt. Cuba observatory two different ways to give a wide field and a close up view. Both photos were taken with a Canon 20D digital SLR at ISO 200 using mirror lock up and a cable release to minimize vibration, but the two setups were otherwise quite distinct. The color balance setting of the camera for both photos was "daylight" and the color was otherwise left as the camera recorded it. In the wide field view, Saturn appears to the left of the moon and Regulus is up and to the right.

To obtain the wide field view, the Canon EF100mm f/2 lens was used with the camera mounted on a tripod. This lens is actually very sharp wide open, but MTF testing has shown that it gives slightly better resolution at f/4.0 and higher. This is one more example of the rule of thumb that says camera lenses give their best resolution about 2 stops down from wide open. The exposure time was 0.5 seconds.



To obtain the close up view, the camera was mounted in the focuser of the DuPont 4.5" refractor using a T-ring and 1.25" nosepiece, also known as a "T-adapter". Because this telescope is equipped with a relatively crude focuser, the best achievable focus had to be found by trial and error by repeatedly adjusting the focus and then photographing nearby Regulus. The magnified image on the camera's display screen showed when an acceptable focus position was found, at which point the eclipse was photographed.



The image of the full moon projected by the DuPont refractor's objective lens is slightly too large to fit on the APS-C sized image sensor of the Canon 20D, so the left and right sides of the eclipsed moon were recorded separately. The two photos were later stitched together in the computer using a program called "Photostitch". The exposure time for both half-photos was 13 seconds at about f/15, once again using an ISO setting of 200.

LUNAR ECLIPSE CYCLE PHOTO – Bill McKibben

With the help of a clear sky on February 20 and a Canon 20D camera mounting a 200 mm. Zoom lens, and Photoshop to combine the pictures, I prepared the picture of the eclipse below. I hope you like it. (Ed. Note: I am also enlarging it at the end of the FOCUS to allow more detailed examination.)



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AWARDS -- Gus Swartout

The awards committee continues to invite nominations for both the Amateur Astronomer Award and the Luther Porter Award. The Amateur Astronomer Award is open to all DAS members. Individuals who have clearly been identified through their enthusiasm and participation with astronomy are ideal candidates. Have you recognized a good candidate during our monthly meetings or at the star parties? Please take the time to honor this person by submitting his or her name. Past recipient's names can be found on the award planks located in the curved hallway.

The Luther J. Porter Educator Award honors an individual who has made a substantial contribution to astronomy education and/or awareness, in either a professional capacity or as a dedicated amateur. Nominees do not need to be professional astronomers. Luther J. Porter was a long-time member and devoted supporter of the Delaware Astronomical Society and served for many years as its Treasurer. The awards are presented at the annual dinner meeting held in May. Nominations can be submitted to any of the committee members; Bob Karcha, Greg Lee, and myself.

STAR PARTIES AT MT. CUBA – Tom Sidowski

Star parties are usually held on the grounds of the Mt. Cuba Astronomical Observatory. You can bring your on scope or just come to observe through others. Telescopes in use may include the club's 12.5" Newtonian reflector, 17" Coulter Odyssey 2, or 6" Orion SkyQuest XT6 Dobsonian (when not on loan). Star parties are always weather permitting.

Here is the complete schedule through June:

- Friday, April 11 @ 8:00pm
- Friday, May 9 @ 8:00pm
- Friday, June 13 @ Dusk

MT. CUBA TREE PROJECT – Bob Mentzer

In the last month 6 pickup loads of wood have been removed from the grounds. There is still plenty left. You will need a chain saw. Contact Bob Mentzer for details.

LOANER TELESCOPES -- Tom Sidowski

One of the best advantages of being a member of the Delaware Astronomical Society is that all members have the privilege of being trained to use and then borrow equipment owned by the club for personal use. Currently, we have two scopes available for loan: a Celestron 8" Schmidt-Cassegrain, and a 6" Orion SkyQuest XT6 Dobsonian reflector. The loan is for at least a month. If you're interested in checking out either of these scopes, contact Tom Sidowski at 239-1844.

DAS ASTROPHOTOGRAPHY SPECIAL INTEREST GROUP -- Bill Hanagan

The DAS astrophotography special interest group (DAS AP SIG) meets on Friday nights at 7:30 P.M. every other month at Mt. Cuba regardless of weather. The SIG also meets for photo shoots scheduled on 1-2 day notice to synchronize with the weather.

The monthly meetings are informal and typically include the presentation of astrophotos taken by the members along with an extended question and answer period. Objects commonly photographed include constellations, auroras, lunar eclipses, and planetary photos, as well as a wide variety of deep-sky objects such as nebulae, galaxies, star clusters, etc. The topics discussed cover the entire gamut of astrophotography, from how to get started with a minimum of equipment, to polar aligning your telescope, all of the way to the fine points of using auto-guiders and post-processing digital images.

You can get started in astrophotography with just your current camera mounted on a tripod or a motorized telescope by taking wide field photographs of meteor showers, conjunctions, constellations, and star trails. As you move to progressively fainter and smaller subjects, you'll need better equipment. Joining the AP SIG is a great way to learn what equipment you need and what works well before you spend your money.

If you are interested in joining the AP SIG, just email your name, address, and phone number to me at hanaganw@comcast.net (using "@" and "." in place of □ and □).

SAWIN OBSERVATORY REMINDER

-- Tom Sidowski

The DAS maintains a club observatory on the grounds of the Mt. Cuba Astronomical Observatory. The Sawin Observatory houses the club's permanently mounted 12.5" reflecting telescope and a 17.5" Coulter Odyssey 2 Dobsonian telescope. It is for the use by club members once they are trained and checked-out in a simple operating procedure. Members who are interested in becoming key holders of the Sawin Observatory should contact me at 239-1844 to arrange for training in the use of the facility

LIBRARY NEWS -- Glenn Bentley

I would like to take this opportunity to invite the membership to drop by the library at the end of the March meeting to check out reading material for those nights when the 'scope is in the shop. I hope you all got to enjoy last month's "Patchy" Lunar Eclipse, which I did after moving into the lee of the house. Clear Skies.

DAS AMATEUR TELESCOPE MAKING SPECIAL INTEREST GROUP -- Bill Hanagan

The DAS Amateur Telescope Making (ATM) Special Interest Group (SIG) meets on evenings and weekends according to the availability of the members and the particular projects that are underway. The general range of activities of the ATM SIG includes all manner of telescope making, mirror making, and the making of accessories for telescopes and observing.

Anyone interested in joining the ATM SIG should email their name, address, and phone number to me at hanaganw@comcast.net (using "@" and "." in place of □ and □). Meeting dates are announced primarily by email, so if you are interested in telescope making, be sure to let me know!

SUMMER ASTRONOMY COURSES FOR TEACHERS -- Hank Bouchelle

The DAS has quite a few teachers among its membership, and this may be of interest to you should you be one of them. And please feel free to pass this information along to teachers of your acquaintance who may be interested in astronomy education.

The College of the Atlantic in Bar Harbor, Maine, offers accredited two and four credit summer residential courses for teachers in a variety of subjects, including astronomy. The College is set on the shores of Frenchman Bay

and offers close access to the beauty of Acadia National Park and the many attractions of Mt. Desert Island. Room and board are available at the College.

Introduction to Astronomy (July 13-26) is a four credit course that presents astronomy concepts and content principally through a variety of activities that participants can use in their classrooms, and thus is suitable for teachers of all grade levels.

Teaching with a Portable Planetarium (July 7-August 2) is a two graduate credit course that provides instruction in setting up, taking down, and maintaining a portable planetarium, and includes the development of instructional programs.

Further information may be obtained by contacting Jean Sylvia, Associate Director of Summer Programs, at jsylvia@coa.edu or 800-597-9500.

DAS FORUM/E-MAIL SITE ON YAHOO

--Don Shedrick

This is a restricted e-mail service for use by DAS members for DAS purposes. To use this site, go to <http://groups.yahoo.com>; search for Delaware astronomical society; and click on the link that comes up. To join, you must have a Yahoo ID and password; if you don't, you can register at this time by following Yahoo's instructions. You will then be allowed to "Join the group" upon clicking in that box. You must then register for the DAS group and add your profile by clicking on "add new profile" and completing the form. When adding or editing your profile, you will need to enter your actual name in the "Real Name" box so you can be identified as a DAS member so Don Shedrick can approve your application to join the DAS group, and everyone will know to whom they are communicating. Finally, specify your desired email address for delivery of messages. Note you may choose to not have your name and email address displayed to anyone other than DAS members who are members of the Yahoo DAS email group.

For more detailed instructions, go to the DAS web site under DAS Resource Links.

MEMBERSHIP EXPIRATION NOTICES

if you receive the FOCUS by email, you will be notified by email. If you receive it in the mail and the mailing label on the envelope containing your FOCUS is marked with Red Marker, your membership is expiring or has expired. To continue to receive the FOCUS, Sky and Telescope or Astronomy, and Reflector, send the renewal form below with your check to:

DAS, c/o Robert Mentzer
605 River Road
Wilmington, DE 19809

DAS CONTACTS

Call any of us with your concerns!

Membership: Any of the following:

President: Hank Bouchelle-----	302-429-4013
Vice President: John Case -----	302-836-4888
Secretary: Lynn King -----	302-764-8816
Treasurer: Bob Mentzer-----	302-764-1926
DAS/MCAO Advisor: Emil Volcheck-----	610-793-5156
Education Chair: Bob Karcha-----	302-999-9509
Messier Club: Lynn King -----	302-764-8816
Observing: Greg Lee -----	302-762-5358
Youth Coordinator: Sarah Baird -----	302-561-0810
Archivist: Rene Van Caneghem -----	410-392-3718
Board Members at-large:	
ATM and AP SIGs: Bill Hanagan -----	302-239-0949
Chairman, Observatory Committee and Monthly Star Parties: Tom Sidowski -----	302-239-1844
By-Laws: Henry Bouchelle -----	302-983-7830
Light Pollution Strategist; Greg Weaver	302-239-1338
Library Chair: Glenn Bentley -----	410-869-0706
Ad Hoc Star Parties: Sheila Vincent - ---	302-322-4739
Elections Comm. Chair – Sarah Baird	302-561-0810
Awards Comm. Chair – David Swartout	302-836-4618
MCAO Web Page: www.mountcuba.org	
DAS Web Page: www.delastro.org	

FOCUS Editor: A Volunteer is needed to replace Lee Kaser, who is retiring for the second time and has a major time conflict. If you have email, can edit a bit and use a word processor, you can do this job. Formally described as Publications Chair, this is a Board position which puts you in the know about Club activities. Contact Lee Kaser (kaserlo@msn.com or 302-995-6251) or Hank Bouchelle for more information.

WEBSITE OF THE MONTH – A LOT OF GOOD STUFF -- GIVE IT A LOOK

<http://www.astro.washington.edu/pages/outreachtools.html>

The U. of Washington has about 30 faculty in the Department of Astronomy

MEMBERSHIP APPLICATION OR RENEWAL

If you have questions, call any of the member representatives listed above. Otherwise, just check the appropriate boxes and complete the form below. Print it or cut it off and send it with your check to Bob Mentzer at his address given above. The magazine prices are group rates to DAS members. Thanks, and welcome to the DAS if you're just joining us for the first time.

MEMBERSHIP APPLICATION OR RENEWAL FORM

New Member
Renewal

Senior/Family Membership \$20.00
Junior membership (16/under) \$10.00
Sky and Telescope Magazine \$33.00
Astronomy Magazine \$34.00

NAME _____

STREET ADDRESS _____ Total Submitted ----- \$

CITY _____ STATE _____ ZIP _____ TELEPHONE _____

E-MAIL ADDRESS _____

Any Questions? Call us.
