

Report of the CASCA Education & Outreach Committee, May 2006

Submitted by John R. Percy, Committee Chair

Committee Membership

Martin Connors (2004-2007), Michael De Robertis (2005-2008), Jayanne English (2005-2008, vice-chair, chair-designate), Bill Harris (2005-2008) Robert Lamontagne (ex-officio), Nathalie Martimbeau (2003-2006), Margaret Milne (2004-2007), John Percy (2005-2008, chair), Joanne Rosvick (2005-2008); Rene Plume is Board Rep, and Alyssa Moldowan is the Graduate Student Committee rep.

*** Board issues:

It has been agreed by the Board that Jayanne English will become Chair of the Committee, effective at the end of the 2006 CASCA meeting. John Percy will remain a member of the committee. The committee will meet at CASCA 06 and elect a Vice-Chair. We recommend that Nathalie Martimbeau be reappointed to the committee for 2006-9; she has been effectively active, especially with regard to maintaining contact with the planetariums and science centres, and with astronomy education in Quebec and in the French language. We recommend also that Dennis Crabtree (NRC) be added to the committee for 2006-9. He is an international leader in the movement to increase and improve astronomy communication; he is already involved in the AstronomyCanada.ca project; and will be especially valuable as we plan for 2009 -- International Year of Astronomy.

Committee Meetings

The committee met at CASCA 2005, in Montreal. A meeting of the Halifax "astronomy education community" was held on June 4, 2005, following a similar and successful meeting in Victoria in March, 2005. Representatives of several local universities, astronomy clubs, science centres, and the school board were present, and provided useful input. There is a Greater Toronto Area Astronomy Education Network, which meets annually to develop and coordinate useful projects in the GTA area. Dennis Crabtree, Jayanne English, Jim Hesser, and John Percy met for a day in Winnipeg in December 2005, and Scott Young (RASC) attended part of that meeting. The committee will meet during CASCA 06.

Education Co-ordinator

The contract of our part-time (0.2FTE) education co-ordinator Heather (Scott) Theijsmeijer was renewed in November. By agreement of the Board, her position was renewed for the 2005-6 year, even though our external grants expired early in 2006 (see below). This represents a strong commitment, on the part of the Board, to education and outreach.

*** Board issue:

We must find the means to continue to fund this position beyond November 2006 (see below)!

Ontario Youth Science and Technology Awareness Program Grant

The grant terminated at the end of February 2006 (it had already been extended) but we were allowed to spend the remaining funds to pay our Education Coordinator in advance for six months beyond that.

Virtual Outreach for Canadian Astronomy (VOCA) = AstronomyCanada.ca

In September, we submitted an application to NSERC PromoScience (John Percy, PI; Jayanne English, Co-I) to fund an enhancement of the CASCA education and outreach program to reach a mass audience. This was the largest undertaking of the committee in the 2005-2006 year. This project will produce high-quality images and information for the mass media (print and electronic, planetariums and science centres) highlighting Canadian astronomy and research advances. The request was for \$90K. CASCA would contribute \$30K, and the rest would come from a variety of sources including in-kind.

Summary of Application: "Images are central to astronomy education, outreach, and communication. VOCA will provide (i) informative, inspiring astronomical images, graphics, and supporting information, highlighting Canada's leading role in astronomical research and discovery, and (ii) an efficient, effective, high-impact process for bringing these to all Canadians, including pro-active dissemination of this material to mass media, to planetariums and science centres, and to the hundreds of professional and amateur astronomers who voluntarily give face-to-face presentations to the public. VOCA will also make the material freely available through a well-designed, existing website. VOCA is a partnership project which is a key part of a comprehensive long-term plan for Canadian astronomical research, education, and outreach."

In anticipation that this project would begin somehow, we held a meeting in Winnipeg on December 14, attended by Dennis Crabtree, Jayanne English, Jim Hesser, and John Percy. Costs of this were paid from the Ontario education grant. This meeting was very useful for establishing the direction of the project. In particular: the name/website AstronomyCanada.ca was chosen and reserved for the project, which now goes under that name.

Unfortunately the PromoScience grant did not come through. After a great amount of effort, we finally received the promised feedback on the application. Committee members who saw it found it rather puzzling. Nevertheless, I hope that we will reapply, taking this feedback into consideration.

The momentum from the December meeting has continued. The project will be described in oral and poster papers at CASCA 06, and there will be an open discussion after the education session. Jayanne English has organized a workshop, for CASCA 06, for astronomers who wish to learn how to create images for the media and the public.

Other Sources of Funding

At its May 2005 meeting, the CASCA Board agreed, in principle, with our recommendation for a fundraising campaign to support education and outreach. This funding would be required if our PromoScience application is successful, or if it is not -- which is the case. We understand that some of the Westar funds could be used for this purpose. Other funding could be raised from among our corporate

partners. I strongly recommend that we also embark on a fundraising campaign among our own members, as other organizations such as the AAS do. If we could raise an average of \$30 per member, we could support our existing education program from that!

*** Board issue

Are we willing to embark on an internal fundraising campaign, using CASCAtrust?

CASCA-Westar Lectureship

Extensive publicity for the CWL has been done, both print and electronic. Only one visit was made since May, involving several presentations at the Oshawa Public Libraries. Other prospective visits are listed under Heather's report, below. CASCA members, especially those who have contacts with smaller centres across Canada, should help us publicize the program. We have several willing volunteer lecturers, waiting to be assigned.

CASCA Education Web Site

Heather Theijsmeijer (as mentioned below) continues to maintain and develop the website. For apparently good technical reasons, the website continues to be hosted by Travis Whyte in Alberta. As part of the translation of the RASC's "SkyWays" guide for teachers into French, we have benefitted from professional translation of several important sections of our website.

URL: <http://www.cascaeducation.ca>

CASCA Annual Meetings

CASCA 06 includes an education session, with a plenary paper on AstronomyCanada.ca, contributed papers, and an open discussion. A teachers' workshop was organized, at the last minute, by John Percy with help from local educators; the keynote speaker is Paul Delaney, and the main workshop leader is John Percy. There will also be a Sunday morning workshop, run by Jayanne English and Zolt Levay, informing professional astronomers on how to make striking electronic images to support their science stories.

Publications

We continue to get a good number of education submissions to E-Cass, and we urge CASCA members to continue this habit. The Journal of the RASC continues to publish a useful Education Notes column.

Planetariums

A consortium of Canadian planetariums, following on their success in producing a planetarium program on "Origins" highlighting the work of Canadian astronomers, applied for partial funding, from Heritage Canada, for a program on Astrobiology, again highlighting relevant Canadian contributions. We wrote a letter in strong support of this project. Here's the good news from Pierre Chastenay:

"Well, I only have good news to report. We were granted money from

Heritage Canada, NSERC and CSA to produce a 30-minute planetarium show, whose working title is "Is anybody out there?" ("La vie dans l'Univers", in French). The show is written and produced by Alan Dyer, from the Telus World of Science Planetarium in Calgary, with Erik Koelemeyer (H. R. MacMillan Science Centre, Vancouver), Scott Young (Manitoba Museum Planetarium, Winnipeg), and myself acting as co-producers. Like we did for "The Quest for Origins -- La qu=EAte des origines", our first collaborative show produced two years ago, we are distributing the work load among the four partners, with help from consultants, artists and scientists along the way. I enclose the latest version of the script for you to review, if you find the time in your busy schedule to read it. Last summer, Hans Thater, from the Winnipeg Planetarium, went on a field trip in the high Arctic with scientists from McGill and CSA to shoot panoramas and all skies, as well as documenting the work of Canadian scientists working on Mars analog sites up there. This imagery will be used extensively in the show. We also have all sky shots from inside Alvin, the submarine that brought back stunning images from deep sea vents. Right now, we are shooting interviews with Canadian scientists from all over the country who work on astrobiology or related fields. Alan Dyer was in Vancouver and Victoria a week ago and he will be in Montreal for two days next week to interview several researchers from UdeM, McGill and CSA. We will excerpt video clips from these interviews to use in the show. In January, we will have a final script to translate in French and record in both languages. At the same time, work will begin on the other images and video that will be used in the show. We aim at a Canada-wide opening in mid-May 2006."

Royal Astronomical Society of Canada

The RASC received funding, from NSERC PromoScience, to partially support the translation of their teachers' guide "SkyWays" into French. The guide was updated at the same time, and is now available from the RASC National Office.

Mary Lou Whitehorne, who wrote this guide as a voluntary effort, was the 2005 winner of the Astronomical Society of the Pacific's award for outstanding outreach by an amateur astronomer, for this and many other contributions to education.

Science and Technology Awareness Network -- STAN

In November 2005 in Toronto, I and Heather Theijsmeijer (as mentioned below) attended the second annual conference of STAN. I am on the founding steering committee of this new organization; I see myself as representing scientific organizations such as CASCA, as well as the universities. Heather presented a poster about CASCA's education and outreach program, and distributed a flyer in the "carousel" sessions. Notes from the presentations are eventually posted on the STAN website: www.scienceandtechnologynetwork.ca

Science Teachers' Association of Ontario

Immediately following STAN, Heather (as mentioned below) presented a workshop at the annual three-day conference of STAO, which attracts 1000-2000 teachers. The workshop highlighted the CASCA education website, and other programs. I met with several useful people in STAO and in the Ministry of Education, to publicize and disseminate both the

CASCA education website, and the English and French versions of SkyWays.

Report of the CASCA Education Coordinator, Heather Theijsmeijer

Heather presented at the 2005 conferences of the Science Teachers Association of Ontario, and the Science and Technology Awareness Network, and plans to present at their 2006 conferences, and also the teachers' workshop at the Canadian Association of Physicists 2006 conference. She has prepared handouts for the graduate and undergraduate student workshops at CASCA 2006.

She has updated www.cascaeducation.ca monthly, with events across Canada, and articles from ECass. An image gallery was created, along with pages on "Getting Started in Stargazing", and "Summative Assessment Ideas for Astronomy". A "latest additions" link has been added to the homepage.

She has continued to prepare articles for ECass, and to encourage others to do so.

Three CASCA-Westar Lectureships are in the works -- one for Okanagan, one for Ottawa, and one for Lethbridge. Other enquiries have been received, but they do not fit the mandate of the program.

She also handles the CASCA Education email account, which generates feedback and enquiries.

Her priorities for the summer are: (i) to check that all the links on the website are still active; (ii) with assistance, to improve and expand the French-language pages; and (iii) to support our new initiative to provide images and information about Canadian astronomy and astronomers, by giving the website an even stronger Canadian flavour.

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