

Report of the CASCA Education & Outreach Committee, November 2005

Submitted by John R. Percy, Committee Chair

Committee Membership

Martin Connors (2004-2007), Michael De Robertis (2005-2008), Jayanne English (2005-2008, 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.

The committee met at CASCA 2005, in Montreal. A meeting of the Halifax "astronomy education community" was held on June 4, following a similar and successful meeting in Victoria in March. 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 met earlier in November, and developed some useful projects in the GTA area. I also had a useful discussion of "Outreach" in the Department of Astronomy and Astrophysics at the University of Toronto. The meeting came up with some interesting suggestions, such as having on-line video of curriculum-related astronomy content (presented by Canadian astronomers who are good public lecturers) and exemplary pedagogy (presented by experienced astronomy teachers).

Education Co-ordinator

The education co-ordinator is Heather (Scott) Theijsmeijer is doing an excellent job on our education initiatives. Heather keeps our website up-to-date, expanding, and effective, and makes sure that there is a steady stream of education material in E-Cass. A point-form report from Heather is attached.

Virtual Outreach for Canadian Astronomy (VOCA)

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. This was the largest undertaking of the committee in the past few months. VOCA will produce high-quality images and information for the mass media (print and electronic, planetariums and science centres) highlighting Canadian astronomy and research advances. We hope to hear the outcome of our application very soon. The request was for \$90K. CASCA would contribute \$30K, and the rest would come from a variety of sources including in-kind.

In anticipation that this project will begin, somehow, we have

scheduled a meeting in Winnipeg on December 14, to be attended by Dennis Crabtree, Jayanne English, Jim Hesser, and John Percy. Costs will be paid from the Ontario education grant. Even if the PromoScience grant does not come through this year, I think we are committed to the VOCA concept, given what is recommended in the LRP.

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."

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. 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!

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. There is some interest in a visit in the Ottawa area. CASCA members, especially those who have contacts with smaller centres across Canada, should help us publicize the program. We have several willing volunteers, waiting to be assigned.

CASCA Education Web Site

Heather Theijsmeijer 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, we have benefitted from professional translation of several important sections of our website.

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

CASCA Annual Meetings

There were a variety of successful education events at CASCA 2005, including a teachers' workshop (by Pierre Chastenay) that was so popular that a second "section" had to be organized. We are now planning for the education sessions for CASCA 2006, which will be a joint meeting with the AAS.

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-minutes 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 quête 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.

Science and Technology Awareness Network -- STAN

In November 2005 in Toronto, John Percy and Heather Theijsmeijer 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 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.

Point-Form Report from Heather Theijsmeijer:

Conferences:

- +CASCA General Assembly - oral presentation
- +STAN - poster/carousel session
- +STAO - oral presentation

Resources:

- +Teacher workshop and CWL evaluation forms
- +Re-vamped Canadian Junior Astronomer Program (with more focus on teacher-use of project)

Website:

- +Regular updating of site (planet visibility, calendars etc.)
- +Development of new image gallery
- +Expansion of current events to cover Western and Eastern Canada
- +Development of new grade 12 materials:
 - unit plan
 - resource list
 - textbook review, focussing on astronomy content

+Teacher resources:

- summative assessment ideas

+French:

- new translation of CJAP
- current events in Quebec
- formatting and posting the French FAQ from Mary Lou
- organizing with Nathalie proof-reading (probably to get started in the new year)
- +Checking of site for bad links (and replacing) both French and English
- +Daytime astronomy activities
- +Starting to prepare pages for highlighting Canadian research, astronomical news etc., gearing toward media packages

Miscellaneous:

- +E-cass articles

From the conferences - STAN was great for making connections...I spoke to several people about CWL possibilities in Alberta, getting more awareness for talks and other astronomy events, as well as getting more information about other astronomy programs in the province. At STAO, I attended a talk on using astronomy in the grade 11 general science course, and was asked to present my talk at the Ontario Society for Environmental Education (<http://www.osee.org/>) conference in May. Not sure if the dates are good yet, but I will get more information about it.