

Heritage Committee: Report to the Board, May 2015

Present Membership

	Term	Affiliation
Elizabeth Griffin <i>Chair</i>	2015–18	DAO/NRC
William McCutcheon	2012–16	UBC
Nathalie Martimbeau	2015–18	Montreal Planetarium
Eugene Milone	2015–18	University of Calgary
David Pantalony	2014–17	Science Curator, CSTM, Ottawa
Randall Rosenfeld	2015–18	University of Toronto
Ian Shelton	2014–17	(University of Toronto)
David Turner	2014–17	Saint Mary's University
Gordon Walker	2014–17	UBC and UVic
John Percy	2014–17	University of Toronto
Lee Robbins	2015–18	University of Toronto
Tim Robishaw	2015–18	DRAO/NRC
Jasper Wall	2015–18	University of British Columbia

Membership: Three new members have joined during the past year. The Committee's range of expertise and experience is now particularly broad.

Committee Activities

The Committee's members are widely spread geographically and are therefore not able to meet in person, but confer by email when events or queries arise. As described in the November report, five members plus two others have volunteered as authors of a book on the "History of Canadian Radio Astronomy" that was planned and researched by Rich Jarrell. Sadly, Professor Jarrell passed away suddenly in late 2013, but the chapters were identified and a Preface was written. His research notes and taped interviews are being made fully and freely available to the Team. Attempts are under way to secure sponsorship to support any necessary visits, for instance to Archives Canada in Ottawa.

Another issue outlined in our last Report concerns the creation of a physical archive for papers and other items of interest to CASCA. It appears to be still outstanding.

Video interviews with senior members of the Canadian astronomical community are continuing, as and when opportunities present, under the Committee's long-running programme to create a video archive. A catalogue of subjects, with links to the actual videos, should be made available on the Committee's website.

Other Activities

Digitizing the spectra of the DAO: About 3400 coude spectra have now been digitized with the in-house PDS and fully processed, representing about 25% of the total of useable, available plates. A very able UVic co-op student completed the final stage of upgrading a second PDS (imported earlier from KPNO). It should now be possible to digitize an archive of plates more efficiently. However, there is no obvious source of funds to support that work. A searchable on-line catalogue of log-book entries from both contributing telescopes (1.2-m and 1.8-m) up to 1970 is still in preparation manually; all of the 1.2-m books, and 75% of the 1.8-m ones, have now been included. (From 1970, printed output is available and is being converted via OCR). Furnishing the

community with a inventory of what a plate archive contains is essential for these efforts; the chief goal of doing the scanning is to make the actual spectra available to the community, but no-one will use such a resource unless basic information about the archive *contents* is first provided.

Griffin gave a paper (“We Are Not Alone”) at the RASC’s AGM last June, UVic, describing “data at risk” – pre-digital data in all the sciences. It illustrated the value of recovered data for modern repurposing, with special reference to astronomy’s own “at risk” heritage.

Pantalony (CSTM) reports that the Museum has acquired one of the Hydrogen Fluoride absorption-cell and gas-handling units used with the coude spectrographs of the CFH and DAO telescopes by Campbell, Walker and Yang. Imposing the absorption cell’s fiducial wavelength lines directly onto stellar spectra was a key development in the detection of planets orbiting other stars. The acquisition adds to the earlier one of Walker’s Reticon photodiode arrays developed in the 1970s to record astronomical images and spectra, and representing a major step from traditional photography.

Percy has given presentations on “Toronto’s Astronomical Heritage” in courses for later-life learners and for the Toronto Public Libraries, and has also given several talks on “A Half-Century of Astronomy Outreach: Stories, Reflections, and Lessons Learned”. In addition he has worked with the Royal Canadian Institute to develop a “Toronto’s Scientific Heritage” walk for Heritage Toronto (probably to be offered for the first time this summer).

Robbins is organizing, cataloguing and photographing the antique artifacts and instruments from the David Dunlap Observatory (DDO), working with Rosenfeld and with Paul Greenham (Inst. HPST, UofT) towards an exhibition that will display some of the DDO artifacts. She also is collaborating with Rosenfeld, Karen Mortfield and Michelle Johns (RASC) to organize an 80th-anniversary all-day event in June to celebrate the (re-)opening of DDO. **Shelton** is involved in discussions with the Town of Richmond Hill about the possibility of the Administration Building becoming a Canadian Astronomy museum.

Rosenfeld has written entries on Ludwig E.E. Becker, Pierre Du Val, Sebastian Münster and Antonio N. Zamora for the Biographical Encyclopædia of Astronomers, and has also contributed to other studies (see Publications).

The mystery of the “Mariner’s Sky” continues to attract and inspire. **Turner** and **Rosenfeld** travelled to England in late 2014 (on a grant from SMU) to pursue further research into the original Mariner’s Sky at St. John’s Church in Lunenburg (Nova Scotia) dating from 1870–72. They were able to establish the extent of the education and astronomical training of two possible NS-born originators of the pattern: Bishop Binney (educated in England) and Rev. Owen, Rector of St. John’s at the time (educated in England and NS). They also visited a Liverpool church that may at one time have been a potential inspiration for the chancel ceiling star pattern at St. John’s. Comparative material gathered thus far confirms the unique temporal and geographical aspects of the artifact. Further studies are beginning to reveal the true extent of astronomy education in NS among native Canadians at the time of Confederation.

Publications

Robbins, L, 2015: *David Dunlap Observatory and World War II*, JRASC (in press).

Rosenfeld, R.A., 2014: in *Biographical Encyclopedia of Astronomers*, ed. T. Hockey et al., 2nd edition (Springer-Verlag), pp. 183, 628, 1542, 2407.

Rosenfeld, R.A., 2014: *The Value of Astronomy for a Civilized Society: Richard Adrian Jarrell 1946-2013*, JRASC, 108, 156.

Rosenfeld, R.A.: 2014, *Perception and Reflection: The Earliest Image of Sunspots?*, JRASC, 108, 211.

Rosenfeld, R.A.: 2015, *RASC Catalogue of Meteorites, Third Supplement*, JRASC, 109, 36.

Committee Needs and Priorities

(1) Modest funding (a few \$K) to reimburse research costs, where needed, in the preparation of Rich Jarrell's book, *The History of Canadian Radio Astronomy*.

(2) Digitizing, to a quantitative standard, photographic spectra and images
(Requires funding, and specialist training).

(3) The establishment of a physical CASCA archive.

The Committee wishes to establish routes to archives of (for instance) CVs, lists of students supervised, etc., for the service of history or obituary writers.

(4) To the same ends, a database of professional Canadian Astronomers needs to be created.

(5) Preparing searchable electronic databases of observatory plate archives
(Requires modest funding, and limited training).