

## **FRASC Nomination for Robert Dick**

Robert Dick has been active in the RASC over the past 45 years with contributions at the local and national and international level.

He has been a member since 1969 and soon after that became a life member. From 1977 to 79 he served as a Councillor for the Ottawa Centre. In 1979-80 he was the Chair of the Ottawa Centre's "Observers Group". When the Centre's Observatory had to be relocated to a darker site, he managed the site preparation, which included constructing a mound on which the observatory was to be built. This is now called the Fred Lossing Observatory (FLO) and remains the Centre's primary observing site. From 1981 to 83 he served as Vice President, and from 1992 to 95 he was President of the Ottawa Centre. He has served as a National Representative for Ottawa from 1999 to 2008, and from 2010 to 2012.

During the 1970s he was a prominent member of the Centre's Radio Telescope Team. He did the mechanical design and engineering of the two large (5 x 15 m) adjustable cylindrical parabolic antennas that were used as a drift array. For a number of years it was the largest amateur radio telescope in the world. At the Observatory's original site south of Ottawa, he co-discovered with other Centre members and reported the break up of Comet West in March of 1976 and the change in period of the Cepheid CY Aquarii.

As Centre President in the early 1990s, when light pollution began to compromise the effectiveness of the Centre's observatory, he led the development of a light pollution abatement (LPA) program with fellow member Arnold Weeks. Together they meet with seven municipalities in the Ottawa region, and the Regional Municipality of Ottawa Carleton and the National Capital Commission to promote the use of shielded roadway light fixtures. This program resulted in the City of Ottawa Right-of-way Lighting Policy and in the reduction of LP over the Observatory, even with the increasing urban population.

When he was asked to lead the National LP Program in 1998 he adapted the Ottawa Program to be practical on the national scale. He created several new initiatives to increase the effectiveness of LPA. To increase public awareness, he expanded the Ottawa's Centre's LPA Certificate of Merit Program to cover all of Canada and attracted media coverage for municipalities that adopted LPA policies.

These policies evolved into the Dark Sky Preserve Program in 2000 with the designation for the Torrance Barrens in the Muskoka District of Ontario. To increase interest in LPA, Robert broadened and promoted the concern for the impact of LP on the environment. This led to the development of the science of scotobiology in 2003 (the study of the biological need for periods of darkness). Applying scotobiology, Robert developed and authored the Parks Canada Guidelines to Outdoor Lighting for all Park Facilities. Which was adopted in 2006 by the RASC as the Lighting Protocol for DSPs, and by the International Darksky Association in 2012 as their GOL for all their Darksky Places. This Lighting Protocol is now the only internationally recognized guideline and has allowed the RASC to have the most extensive network of Dark Sky Preserves in the World.

His work on the Lighting Protocol has led to his authoring two semi-scholarly articles in an international encyclopaedia on the topic of light pollution and dark sky preserves, a peer reviewed

paper setting down the rationale for the Protocol and its illumination thresholds. It was most recently promoted to the IUCN (International Union for Conservation of Nature – an independent advisory body too the United Nations) at the World Park Congress in Sydney Australia (Nov. 2014).

He continues to be “the-guy-to-call” regarding Dark Sky Preserves and Urban Star Parks and manages the RASC DSP and USP Programs.

Robert continues to promote the RASC in his presentations to the public, parks, conservation groups and municipalities in Ontario, Quebec, Manitoba, and British Columbia, and during interviews with the national media. Although most of these interviews centre on reducing light pollution, he highlights the RASC’s leading role in protecting the night environment.

His contribution to the Keystone Summit in Flagstaff AZ (august 2014) led to the consensus that the lighting technology currently exists to reduce LP – it just has to be incorporated into low-impact products. He also reviewed and commented on the new Lighting Policy for Sydney Australia.

Robert has been an advisor to the American IYA Light Pollution Program in 2009 and continues to be consulted by the Dark Sky Working group of the International Union for the Conservation of Nature (IUCN) regarding light pollution awareness in world parks.

Robert is increasing the awareness of the RASC internationally with presentations in Europe, the United States and Australia. This international profile helped to create the Special Supplement of the RASC Journal about Light pollution. Robert developed relationships with international leaders in specific fields of study and compiled their essays and papers into the Supplement, which was published by the RASC in December 2012. These have resulted in the RASC as the de-facto leader in dark sky preserves, and low-impact lighting.

Robert has been very active in other aspects of astronomy outreach and education – though not specifically associated with the RASC. He provided “countless” talks and public presentations at the Canadian Museum of Science and Technology between 1979 and about 2006. As a sessional lecturer (part time) at Carleton University between 1985 and 2008 he delivered the Introduction to Astronomy courses, and taught a similar course at Algonquin College for several additional years. He also taught an introductory astrophysics course at the University of Ottawa (2009-2010) and still teaches Continuing Education courses there on a series of astronomy topics as well as an annual astrobiology course.

The Carleton Lectures were broadcast on local TV and the lectures were distributed across North America, to Asia and Europe on videotapes, then DVDs and then by streaming over the Internet. While teaching part time at Carleton University between 1999-2000, Robert developed an educational TV Program: *The Celestial Sphere: a Narrated Tour of the Night Sky* and a set of star maps for schools and outreach events. These continue to be distributed by Starlight Theatre and other astronomy outlets in Canada and the United States.

He has also authored the stargazing chapter in the “*True Canadian Almanac*” for the last three years.

On a more personal side, he designed and built a large (0.6 meter) telescope and observatory at a dark rural site in 1986 and each year he hosted bi-annual “open houses” at his lakeside observatory that attracts Ottawa Centre members and people from other cities in southern Ontario.

This long list of activities and accomplishments can truly be considered a “career.”