IUCN supports dark skies for nature conservation

David Welch, Chair, IUCN Dark Skies Advisory Group
dsag.iucn@gmail.com

While the movement to restore and protect skies from light pollution equates broadly with the world of astronomy, some ecologists and natural resource managers have been concerned about it for over a decade. The first park to have received dark sky recognition dates to 1999, when the Royal Astronomical Society of Canada accorded dark sky preserve status to Torrance Barrens Conservation Reserve, a protected area under the jurisdiction of the Ontario Ministry of Natural Resources. This spurred dark sky advocates to organize the Ecology of the Night Symposium in 2003, at which ecologists, aboriginal elders, health specialists, land managers and astronomers joined their voices tp acknowledge the impacts of light pollution, and the synergy that could come from uniting several disciplines to achieve a common objective.

Since then, the International Dark Sky Association has awarded many natural areas with dark sky status. Other astronomy-based organizations have done likewise, and a couple of protected areas have self-declared as dark sky parks through legislation. Follow the link to the "World list of dark sky parks" on this web site < dsag.darkskyparks.org > to see a list of the thirty-seven currently known dark sky parks and reserves. There is also a growing body of scientific literature on the impacts of light pollution on species and ecological relationships. This emerging awareness and management response by park agencies led the International Union for Conservation of Nature (IUCN) to establish a Dark Skies Advisory Group in 2009.

The IUCN was founded in 1948 as the world's first global environmental organization, and is now the largest professional global conservation network. With more than 1,200 member organizations, including over 200 government and over 900 non-government organizations, it is the world's leading authority on the environment and sustainable development. It may be best known as the organization behind the so-called "red-book" which lists threatened and endangered species. It also compiles information on protected areas, holds quadrennial world congresses on conservation and on parks, provides scientific and management advice, and coordinates capacity building opportunities for its members. In September 2012 it held the World Conservation Congress in South Korea. DSAG took this opportunity to present to the general assembly a motion on light pollution and nature conservation. Here it is in full.

- "Given that species and ecosystems function night and day, and that artificial light can interfere with organism and ecosystem functions;
- Understanding that the appreciation of cultural heritage sites in their authentic state, the enjoyment of landscape aesthetics, and a true wilderness experience may be diminished by outdoor artificial light, glare and sky glow;
- Recognizing that astronomy, both scientific and amateur, and night sky viewing by the general public are essential contributions to understanding and enjoying our natural world;
- Being aware that cultural traditions, mythology and ceremony throughout the world bear a close relationship to night sky phenomena; and
- Noting that energy efficiency, human health and personal safety are all enhanced by the use of proper lighting and diminished by excess lighting;

The World Conservation Congress, at its session in Jeju, Republic of Korea, 6–15 September 2012:

1 Calls upon environmental and natural resource management agencies to recognize that outdoor artificial light should be subject to effective standards in order to help restore and/or maintain the ecological integrity of natural areas and the commemorative integrity of cultural sites, to respect traditional beliefs related to the night sky, and to protect species and ecosystems everywhere;
2 Suggests that urban and non-urban infrastructure management authorities regulate and control outdoor lighting in the areas under their jurisdiction so as to achieve just the right amount, spectrum and timing of outdoor lighting necessary for public use and safety;
3 Encourages natural area managers and non-governmental organizations to promote awareness of dark sky values and the need for and methods of reducing outdoor artificial light;
4 Recommends that universities, science-funding agencies, and scientific institutions foster and support research into the nocturnal aspects of biological and ecological function;
5 Urges protected area management authorities to develop visitor activities that lead to public appreciation and understanding of nocturnal ecology and the night sky; and
6 Recommends that protected area and other conservation agencies seek out opportunities to cooperate with scientific and amateur astronomy organizations and aboriginal peoples on optimum outdoor lighting design, darkness monitoring, delivery of visitor activities, and outreach related to the night sky, the nocturnal aspects of ecosystems and the importance of the night sky to traditional cultures."

You can also find this in English, French and Spanish at < http://portals.iucn.org/2012motions/ >. At the time of writing the motion is number 173, although this may change. The motion was sponsored by the InterEnvironment Institute, USA, and co-sponsored by: Asociación Española de Entomología, Spain; Goncol Alapitvany (Foundation), Hungary; Parks Canada Agency; Sierra Club, USA; and Universidad para la Cooperación Internacional, Costa Rica. It was passed by 100% of the government agencies present and 98% of the non-government agencies present voting in favour.

These recommendations suggest courses of action for the protection of species and natural areas. They also recognize the affinity between natural and cultural heritage values and sites. As well, they advise that the astronomy community need not, and should not, go it alone when calling for light pollution abatement and the establishment of dark sky protected areas. At the end of the day, visitors to parks and reserves should be able to enjoy seeing unspoiled nature, authentic cultural heritage and a clear night sky, and, if not there to see them directly, to have the vicarious pleasure of knowing that such things exist. Please do your part by circulating this information to your colleagues interested in dark skies. Thank you.