

The Loss of Night

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Our generation is witnessing the migration of both the best and the worst of city life into the country. One of the attractions of rural life is the star-filled night sky. However, most people can't see them. The starlight has been overwhelmed by the glare of artificial lighting.

The most ubiquitous symbols of urbanization and prosperity are illuminated streetlights and commercial signage. From a dark rural site we can see the extent of this illumination as the light domes or "sky glow" above urban areas over 100 kilometres away. But those who study nature are finding that excessive outdoor lighting is actually damaging the night environment. The City of Ottawa's new right-of-way lighting policy is reducing this waste and smaller towns with a more limited tax base can do the same.

But what about private lighting? In the late evening most of us turn on our outdoor lights and go to bed. We leave on a few interior night-lights and perhaps close our curtains to block our view of streetlights that shine into our bedroom windows. What is the harm in this?

Light that shines where is not wanted is more than a nuisance – it is a waste and it can even affect our health and change the balance of nature.

Our bodies suffer wear and damage during daytime activity, which is repaired at night as we rest. The circadian rhythm (our body's internal clock) determines when hormones are released to do the repairs. If outdoor lighting, even as faint as a full moon, illuminates our rooms, our bodies delay repairs as it waits for full darkness. This will inhibit repairs and reduce their effectiveness. Our weakened bodies will be more susceptible to illness and irritability. After a good night's sleep, we

remark about how good we feel. But think how rare these good nights have become.



Nature also depends on the darkness but there are many nocturnal creatures that are most active during the night. They can forage for food with less fear of predators. A single yard light can contaminate over one square. To avoid the danger of the artificial lighting, wildlife may change their behaviour by foraging less or

abandoning their familiar habitat. As they migrate into other areas, they put pressure on other wildlife as they compete for limited resources.

The full moon has been found to affect animal behaviour. They forage less and carry what they can to safety instead of eating in the field. This reduces their food intake. For the rest of the month during the relative darkness, the affected animals compensate by eating more. However, with artificial lighting, there is no dark time.

Songbirds rely on a good insect population but insects are attracted to light from over 100 meters away. This interrupts their normal behaviour of eating, mating and migrating. As they decrease in number, the insect-eating songbirds migrate to other regions in search for a better food source. The apparent loss of songbirds has been attributed to these changes in their environment.



The shoreline along waterways is well marked by outdoor lights. Many of these are so bright that it is impossible to see floating debris in the channel or even the channel markers.



So, why keep our outdoor lights on after we have gone to bed? This image on the left shows 1/2 kw of electricity illuminating the woods all night long. Perhaps vanity plays a role. We want to show off our property. Perhaps it provides a sense of security but people provide security - not light. Outdoor lighting will illuminate our possessions. But it also puts them on display. A thief or vandal will take advantage of this and they don't even need a flashlight. Both their hands are free to do their evil deeds. A sleeping homeowner won't see what is going on - until the morning. A flickering flashlight seen by a neighbour or a light triggered by a motion detector are more effective alarms.



The simplest way to reduce the waste of all-night lights is to turn them off when they are not needed and we should shield those lights we need to keep on. (This house [Cottage3.jpg] is using a 5-watt light bulb!) Not only will we protect the environment, we won't be imposing our lights on our neighbours.

We should become better stewards of our property by minimizing our impact on the world around us. As we change the way we use light, we will reduce the need to generate more power, we will protect the environment and our bodies will feel good about it.