



Light Waste – Effects on Fauna

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Throughout the millennia animals have lived and thrived in an environment in which the only light has been that of the sun, moon and stars. Only within the last century has the environment been infiltrated by artificial lights from towns and cities which have proliferated across the surface of the earth.

Animals of all types have found their rural or city environments polluted to greater or lesser degrees and the increased lighting has had disconcerting and devastating effects on their lives and life cycles.

For predators, increased lighting can mean an extended hunting period each day. This means possibly more food, a better living and a greater chance to live and reproduce. However, for the prey, this means they are under attack daily for a longer period, causing them more stress, greater losses to their populations and an increased stress of losing their lives. This could even cause a threatened population to ultimately crash.

For some night insects, such as moths, which

are attracted to artificial lights, this can mean an enticement to which they will never recover as they constantly circle the light, eventually dropping and dying from exhaustion. For some bats and birds, this means a great opportunity to have an easy meal. ***Lighting is changing local ecology.***

Light pollution interferes with migrating birds' abilities to navigate at night. They usually use the moon and stars to navigate but are also drawn to the bright lights of towns and cities. Here they throw themselves against tall lit buildings, killing themselves by the tens or hundreds of thousands in some cases. Some also follow bright lights to the ground, crashing to their deaths as a result. In some cities, such as Toronto, which are on migratory routes, organisations have acted to encourage tall building owners to reduce or cut their lighting in order to accommodate migrating birds. This consideration is apparently working well. ***Small efforts and changes can have major impacts and implications when it comes to helping fauna survive effects of light pollution.***



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Sea turtles are also affected by bright lights and blue-colored lighting in particular. Shore lights appear to discourage female sea turtles from coming ashore to lay their eggs. When the eggs do hatch, the hatchlings' instinct is to move toward the sea. However, they are attracted to the bright lights and become prey for opportunistic predators instead.

Artificial lighting also affects those animals that hunt around dusk or wait to forage until darkness finally settles. In areas around towns and cities dusk never ends and full night never begins, thus causing problems for animals such as salamanders, snakes and frogs. Frogs may be particularly at risk as it has been found that the production of vital hormones affecting the frog's life cycle is greatly affected by the amount of night light exposure.

Some plants depend on various types of insects to pollinate them. However, when these insects are affected by artificial light, the plants may not be pollinated resulting in no new generations and eventually the extinction of the plant species.

In humans, artificial light at night can have serious effects as the level of melatonin, a cancer-fighting chemical, is decreased. It is now believed that this has resulted in the increase in Alzheimer's and breast and prostate cancers in industrialised societies. As well, artificial night light contributes to the problem of sleep-deprivation which then causes fatigue, depression, psychological problems, work problems, social problems, etc. The World Health Organisation and the American Medical Association have adopted policies against light pollution after reviewing the relevant research and considering the severity of the situation.

Artificial night light disturbs the natural cycles that animals, birds and insects have always known in a wide variety of ways, many yet to be discovered. It is having a gross negative effect on the environment and must be of concern to us all. Ultimately, we must act to save it and ourselves.

Many types of animals, birds and insects suffer greatly from the effects of artificial lighting in some manner or other.

