



Did You Know? Darkness Matters!



A THIRD OF POLLINATION HAPPENS AT NIGHT

Worldwide, around 30% of vertebrates and more than 60% of invertebrates are nocturnal. Darkness, moonlight and even starlight can play critical roles in their behavior and survival.

All living things, including humans, rely on the day/night cycle.

"Insects are the little things that run the world. If we were to wipe out insects alone on this planet, the rest of life and humanity with it would mostly disappear from the land. Within a few months."

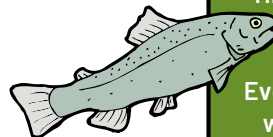
E.O.Wilson

LIGHT ADVERSELY IMPACTS HABITAT'S ABILITY TO PROVIDE FOOD, SHELTER, BREEDING AND MIGRATORY AREAS FOR WILDLIFE.

FISH FREQUENTLY MIGRATE AND FEED AT NIGHT TO HIDE FROM PREDATORS IN THE DARKNESS.

Even low light shining on the water can eliminate their protective cover and decrease the food chain.

Ohio State News 12.19.18
FishBio 6.4.18



LIGHT: A FATAL ATTRACTION

"Moths and other flying insects are drawn to outdoor lights. It's estimated one third of the bugs swirling around those lights die by morning, either by being gobbled up by predators or simply from exhaustion."

Smithsonian Magazine 11.25.19

Without insects to help break down and dispose of wastes, dead animals and plants would accumulate in our environment.



Decades of scientific research indicates that artificial light is harmful to habitat and wildlife including the smallest of insects.

Outdoor lights prevent fireflies from seeing each other's flashes, making it hard to find a mate.

"The climate crisis and the biodiversity crisis are twinned and intertwined."

Why Tiny Ponds and Singing Frogs Matter So Much
NYTimes, 3.27.23



Insects have declined by 75% in the past 50 years

"The Devastating Role of Lighting in the Insect Apocalypse"

Mayflies, which only live and breed for a day, can be confused by light bouncing off asphalt and lay their eggs in the street instead of a lake or stream. A mistake like that can wipe out an entire population overnight. Add it all up, and light is one of the major causes of mortality for arthropods.

Smithsonian Magazine, November 25, 2019



Birds rely on insects for food



We have lost three billion (yes, billion) birds in North America in the last 50 years.

"A staggering loss that suggests the very fabric of North America's ecosystem is unraveling."

Decline of the North American Avifauna, Science AAAS

"Some birds that live in heavily lit urban or suburban areas begin nesting up to a month earlier, leading to a phenological mismatch between when food is traditionally available and when the chicks are hatching and need to be fed."

The dark side of light: how artificial lighting is harming the natural world - Nature, 29 January 2018

The major food source for baby chicks is soft, protein rich caterpillars, most of which don't emerge until temperatures consistently register above 50 degrees.

Nesting too early means food isn't available for chicks.



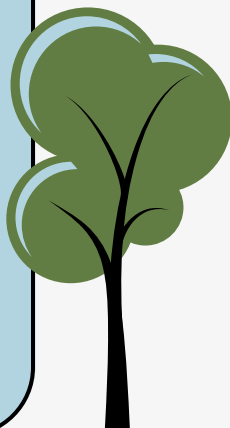
Noise pollution has been a recognized problem for humans for decades, but the effect of noise on wildlife is a potential threat to animal health and long-term survival.

"Bright and loud backyards are less appealing and suitable for birds."

FeederWatch Data

Trees hold their leaves longer in the fall, delaying dormancy, and experience earlier bud burst in the spring when exposed to artificial light at night.

This can weaken trees, cause disease and even premature death.



Female frogs are less selective about mate choice when light levels are increased, presumably preferring to mate quickly and avoid the increased predation risk of mating activity.

Longcore, Rich, 2004



SPRING AND FALL ARE IMPORTANT TRANSITIONAL PERIODS IN NATURE: BIRD MIGRATION, MATING SEASON, TREES GOING DORMANT.

Even an hour of disruption can throw off circadian rhythms in vegetation and the smallest of creatures, and send birds off course.