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Artificial light is dangerous for insects, say scientists - 5th February 2024

Level 4

In prehistoric times, people asked why winged insects were attracted by fire. A saying describes this attraction as being, "like a moth to a flame". A recent study suggests insects do not head towards light because they like it. They are drawn to light because it guides their flight. Artificial light disorients nocturnal bugs like moths, often to fatal ends. The study said all our beliefs about why insects fly toward light "might have been wrong".

The scientists looked at insects flying around artificial lights in a rainforest. Insects usually use the moon to fly in straight lines. However, the artificial lights confused the bugs. They continuously flew around the lights in an erratic manner. Many insects fly to their deaths after being attracted by bug zappers. Artificial light also damages insects' abilities to find a mate, forage for food, and defend itself against predators.

Level 5

In prehistoric times, our ancestors questioned why winged insects were attracted by fire. An old saying describes this attraction as being, "like a moth to a flame". A recent study dispels the notion that insects head towards light because they like it. Biologists have reported that insects are drawn to light because it guides them when flying. The scientists said artificial light disorients nocturnal bugs like moths, often to fatal ends. The co-author of the study said all our beliefs about why insects fly toward light "might have been wrong".

The scientists did research in a Costa Rican rainforest. They observed insects flying around artificial lights. Insects usually use the moon to fly in straight lines. However, around the artificial lights, the bugs became confused and flew in arcs. An entomologist said: "Natural sky light...helps maintain proper flight....Artificial sources...can produce continuous steering around the light and trap an insect." This explains why so many insects fly to their death into bug zappers. Artificial light damages insects' abilities to find a mate, forage for food, and defend itself against predators.

Level 6

Everyone knows that light attracts insects. In prehistoric times, our ancestors questioned why winged insects buzzed around fire. An old saying describes this attraction as being, "like a moth to a flame". However, a recent study dispels the long-believed notion that insects head towards light because they like it. Biologists at Imperial College London have reported that insects are drawn to light because it helps with their orientation when in flight. The scientists said artificial light actually disorients nocturnal bugs like moths and mosquitos, often to fatal ends. Jamie Theobald, co-author of the study, said all our speculations about why insects fly toward light "might have been wrong".

The scientists conducted their research in a rainforest in Costa Rica. They installed artificial lights under the canopy and observed the creatures' flying behaviour. Insects usually navigate by the moon to fly in straight lines. However, around the artificial lights, the bugs became confused and made arcs and erratic patterns of flight. An entomologist said: "Natural sky light...helps maintain proper flight....Artificial sources...can produce continuous steering around the light and trap an insect." This explains why so many insects fly to their death into bug zappers. Artificial light adversely affects an insect's ability to find a mate, forage for food, and defend itself against predators.