

Kitchen lamps as a cause of mortality for urban insects

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ABSTRACT: Fluorescent lamps in kitchens accumulate grease from cooking oil fumes and become traps for insects, particularly dipterans. New smaller lamps may be less harmful for urban insect populations.

Key words: mortality of urban insects, harmful cooking oil fumes, insects in cities.

RESUMEN: Lámparas de cocina como causa de mortalidad de insectos urbanos. En las cocinas, las lámparas fluorescentes acumulan grasa de los vapores del aceite de cocinar y se convierten en trampas para los insectos, especialmente dípteros. Las nuevas lámparas, más pequeñas, deben ser menos dañinas para las poblaciones de insectos urbanos.

Palabras clave: mortalidad de insectos urbanos, humo de aceite de cocina dañino, insectos urbanos.

Humans have known that insects are attracted to light for millennia, but it was Alfred Wallace who first used light systematically for scientific collection (Watson, Lyal & Pendry, 2015). Over half a century later, electric lamps began to be used for insect monitoring and elimination (Windsor, 1911; Luckiesh, Holladay & Taylor, 1929).

Some authors warned about the negative effect of artificial lights on wildlife (Saunders, 1930), which can reach mass proportions (Rodríguez, Burgan, Dann, Jessop, Negro & Chiaradia, 2014), but did not include insects. Blaho et al. (2014) reported the death of aquatic insects caused by polarized reflections in black automobiles, and here I present hypotheses about another light source of insect mortality: fluorescent lamps.

Fluorescent lamps in kitchens accumulate grease from cooking oil fumes and become insect traps (Fig. 1). This particular lamp killed over 1 000 insects in the approximately five years that it was operative in my house in Santo Domingo, Heredia, Costa Rica. Most victims were dipterans, but there were also coleopterans, formicids, homopterans and other groups (Fig. 1). My hypotheses



Fig. 1. Insects killed when they became trapped in the grease covering a kitchen lamp.

are that kitchen lamps kill more insects than lamps in other rooms, that lamps with screens are safer, and that LED lamps are smaller and have a less negative impact on urban insect populations.

HYPOTHESIS

Short articles with observation-based hypotheses that can be a sound base for future research; they can include small samples and preliminary statistical analyses.

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