

Light at night

Achieving balance

Peter Thorns

Chair: Working Group Value of
Light

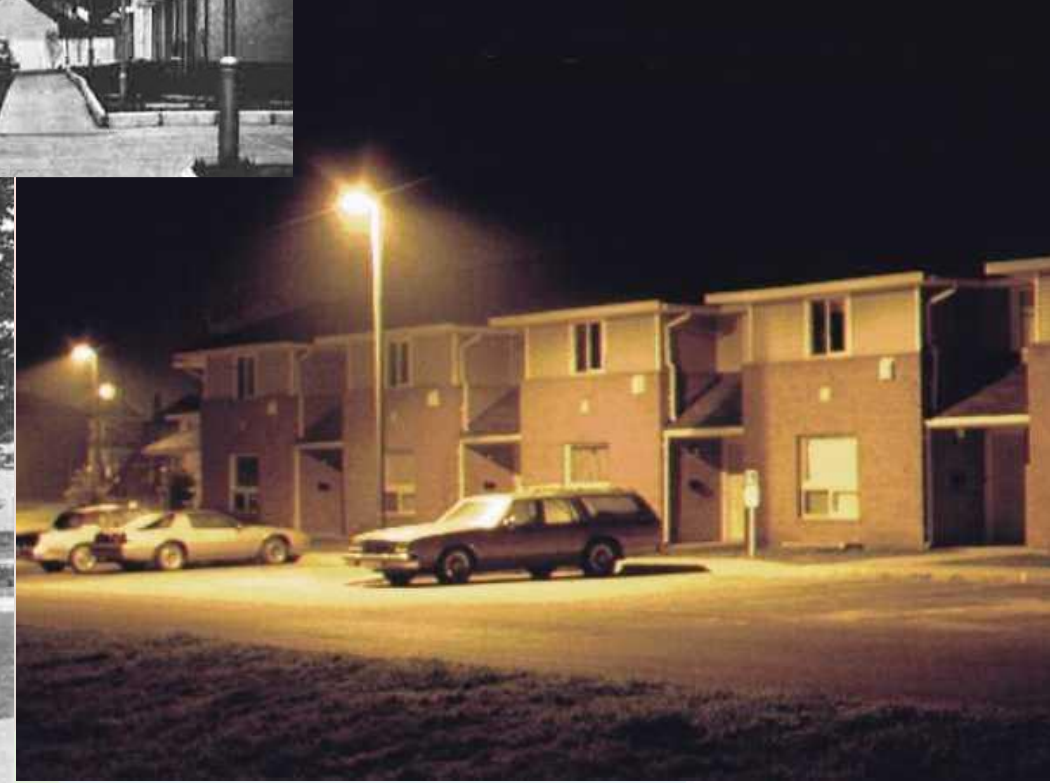




Light is not new

People are used to light

People expect light



Light is for people

Transportation

Work

Leisure

Safety and security



Light is for people

Transportation

Work

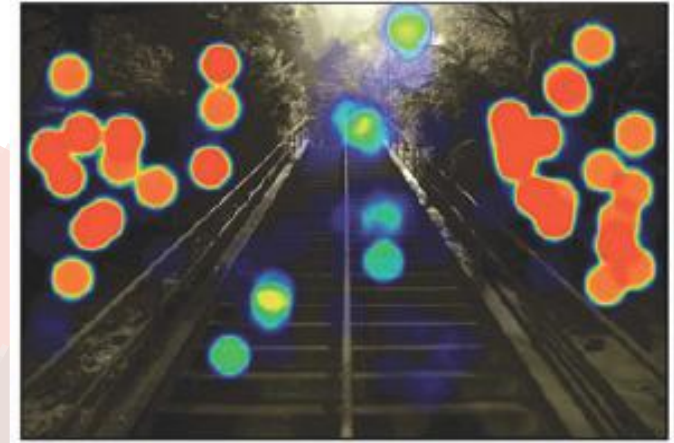
Leisure

Safety and security

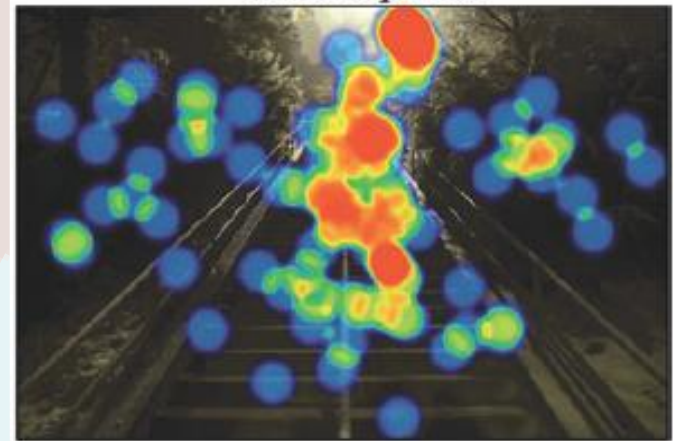
Displayed image from survey



Female responses



Male responses



Gender-Based Heat Map Images of Campus Walking Settings: A Reflection of Lived Experience
Robert A. Chaney, PhD, Alyssa Baer, MPH, and L. Ida Tovar, MPH
Violence and Gender Volume 11, Number 1, 2024



Night is for ecology

Navigation

Feeding

Reproduction

Safety



Night is for people

Wonder

Peace

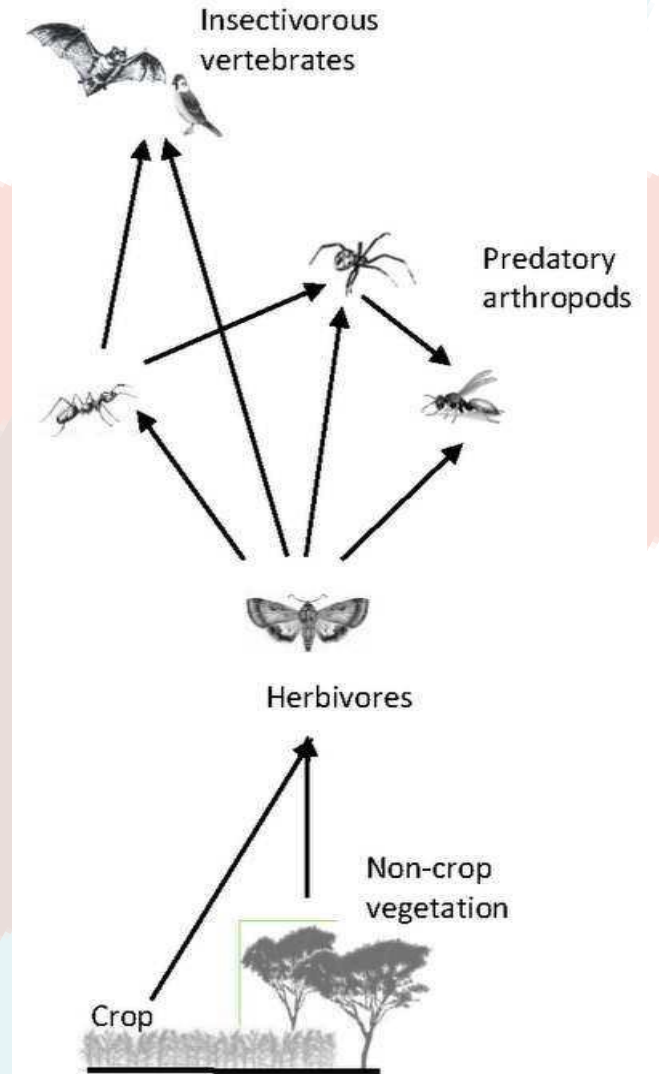
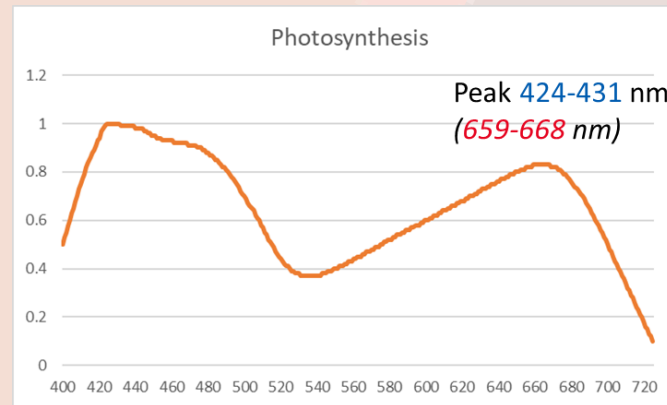
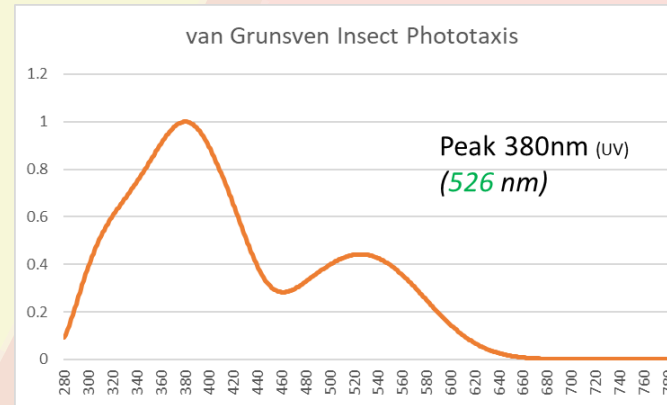
Connection to nature



Before we start....

We cannot light for one species

There is a food chain



Before we start....

We cannot light for one species

There is a food chain

Tableau 5 : Bandes spectrales « à éviter » par groupes d'espèces (Tableau réalisé grâce aux informations issues de la synthèse bibliographique MEB-ANPCEN)

	UV	Violet	Bleu	Vert	Jaune	Orange	Rouge	IR
Longueurs d'ondes (nm)	<400	400 - 420	420 - 500	500 - 575	575 - 585	585 - 605	605 - 700	>700
Poissons d'eau douce	x	x	x	x	x	x	x	
Poissons marins	x	x	x	x				
Crustacés (zooplancton)	x	x*	x*					
Amphibiens et reptiles	x	x	x	< à 500 et > à 550	x	x	x	x
Oiseaux	x	x	x	x		x	x	x
Mammifères (hors chiroptères)	x	x	x	x			x	
Chiroptères	x	x	x	x				
Insectes	x	x	x	x				

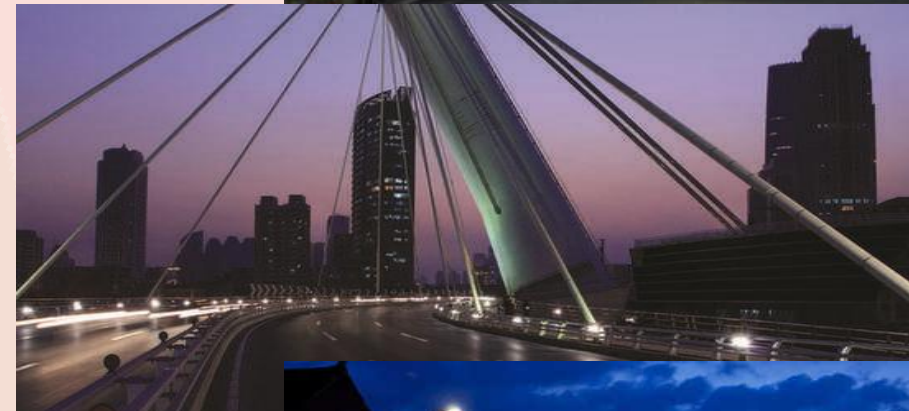
x* : Probable mais non identifié dans la littérature scientifique



We can do better

We have good, quality products

We understand the need for
thoughtful design



We can do better

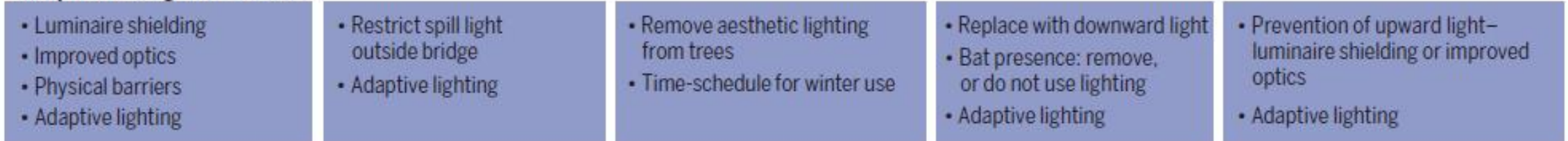
Examples of anthropogenic light



Examples of affected taxa



Examples of mitigation measures



Effects of anthropogenic light on species and ecosystems
Annika K. Jägerbrand and Kamiel Spoelstra
Science 380, 1125-1130 (2023)



We can do better

4 principles:

- All light should have a clear purpose
- Light is directed only to where it's needed.
- Light is not brighter than necessary.
- Light is adapted to suit the task activities or turned off when not required.



We can do better

We need **harmonised regulation across the EU.**

This will create common, easy to understand requirements for manufacturers and designers.





PH: Milkyway from Cissbury, by Neil Jones - WINNER SD Dark Skyscapes





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THANK YOU

Peter Thorns

Chair: Working Group Value of Light



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