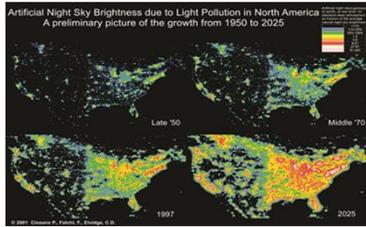


# The effects of nocturnal light pollution and herbivory on plant physiology and function

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## Background



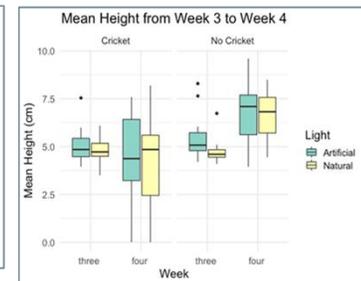
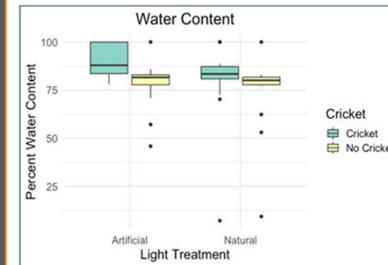
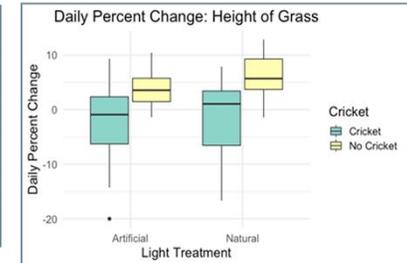
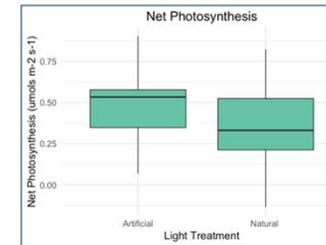
Credit: P. Cinzano, F. Falchi, C. D. Elvidge. Copyright 2001 ISTIL. Theme: Reproduced from ISTIL Report 2001. Rapporto ISTIL 2001 - Stato del cielo notturno e inquinamento luminoso in Italia. ISBN 88-88517-00-6

## Methods

We created 2 light treatments in a CMP6050 plant growth chamber: a natural light treatment at 0.001 lux and an artificial light treatment at 0.3 lux. We grew *Poa pratensis* for three weeks in these conditions and then placed *Acheta domesticus* on designated plants for one week.



## Results



## Predictions

- Net photosynthesis
- Net photosynthesis will be higher in plants grown in artificial light environments because they will be better acclimated with high levels of light
- Water content and Stomatal Conductance
- Plants grown in artificial light environments will have a higher water content because their stomatal conductance will be lower at night.

## Conclusions

Plants grown in artificial light reach their maximum height faster than plants in natural light. We found no difference in net photosynthesis between the light treatments. Finally, there is no difference in water content based on light or cricket presence.

