

Bennie *et al.* 2015 Cascading effects of artificial light at night: resource-mediated control of herbivores in a grassland ecosystem. *Phil. Trans. R. Soc. B.* doi: 10.1098/rstb.2014.0131

## Supplementary material

### List of plant species in mesocosms

Four individual plants of each of the following 18 species (total of 72 plants) were planted in a randomised grid.

#### Grasses

*Anthoxanthum odoratum*  
*Agrostis capillaris*  
*Holcus lanatus*  
*Cynosurus cristatus*  
*Dactylis glomerata*  
*Festuca ovina*

#### Leguminous herbs

*Lotus corniculatus*  
*Lotus pedunculatus*  
*Trifolium dubium*  
*Trifolium pratense*

#### Non-leguminous herbs

*Leucanthemum vulgare*  
*Achillea millefolium*  
*Leontodon saxatilis*  
*Hypochaeris radicata*  
*Prunella vulgaris*  
*Centaurea nigra*  
*Ranunculus acris*  
*Plantago lanceolata*

**Lotus pedunculatus inflorescences**

<b>Fixed factors</b>	<b>AIC</b>	<b>ΔAIC</b>
Light+Date*Herbivores	1978.13	0
Light+Date+Herbivores	1984.50	6.37
Light+Date	1998.18	20.05
Light*Date*Predators+Date*Herbivores	1998.31	20.18
Null model	1999.96	21.83

**Acyrtosiphon pisum individuals**

<b>Fixed factors</b>	<b>AIC</b>	<b>ΔAIC</b>
Light*Date	2460.80	0
Light*Date+Predators	2462.38	1.58
Light*Predators*Date	2467.96	7.16
Light*Date + Predators*Date	2472.50	11.70
Null model	2476.62	15.82

**Supplementary Table 1:** Description of the four models with the lowest AIC values explaining observed counts of *Lotus pedunculatus* flower heads and *Acyrtosiphon pisum* adults in 2013. All models contained plot (mesocosm) as a random intercept to allow for repeated measures. “Light” indicates light treatment (control, white or amber), “Herbivores” indicates presence or absence of herbivores, “Predators” indicates presence or absence of predators, “Date” indicates date of survey. ‘+’ between terms indicates non-interacting terms; ‘\*’ indicates fully interacting terms. For *L. pedunculatus* we selected a zero-inflated negative binomial model, for *A. pisum* a negative binomial model without zero-inflation.