



	Direct effects	Indirect effects	
IMAGO	Activity	Activity suppressed	
	Feeding	Feeding suppressed	
	Phototaxis	'Distracted' by light	Increased bat predation
		Direct mortality	
		Negative phototaxis	
	Navigation	Short-distance dispersal barrier	
		Population fragmentation	
		Long-distance navigation disrupted	
	Reproduction	Pheromone production disrupted	
		Sperm release disrupted	
Oviposition	Copulation reduced		
	Oviposition suppressed or boosted		
OVUM		Increased egg parasitism	
Hatching		Hatching phenological mismatch	
LARVA	Feeding	Feeding suppressed	
	Development	Reduced final body mass	Foodplant quality reduced
			Foodplant quantity affected
PUPA	Pupation	Fail to enter diapause	Increased larval parasitism
	Emergence		Increased predation
		Mis-timed emergence	
ACTIVE STAGES (larval & adult)	Melatonin production disrupted		
	Light stress		
ALL STAGES	Tissue damage/mortality		