



Glowing, Glowing, Gone...

Glow-worms in the High Weald AONB

Quick glow-worm facts

- The High Weald is a hotspot for glow-worms in England
- Glow-worms are not worms but actually beetles
- The High Weald's matrix of small woodlands bordering open grasslands are ideal glow-worm habitat
- A glowing glow-worm is most likely a female trying to attract a mate
- Glow-worms spend most of their life as a larva and only a few weeks as an adult when they are most likely to be seen glowing
- Their glow also acts as a defence, warning would-be predators that glow-worms do not taste good
- High Weald land management advice helps to support glow-worm populations across many different habitats
- Glow-worms are honoured at the Hyde Park Animals in War Memorial for aiding allied troops in WWI with map and letter reading.

Iconic insects

Glow-worms are nocturnal beetles from the firefly family, which use bioluminescence, in the form of a steady greenish light to attract a mate. They spend most of their life, approximately two years, in a larval stage, before pupating over a couple of weeks into an adult. As an adult their life is short, just a few weeks maximum, in which the goal is to mate and for the female lay eggs before dying¹.

The common glow-worm *Lampyrus noctiluca* is found throughout England. The female emits a bright light, whilst larvae and even eggs can emit a low-level glow. She does not have wings, so utilises taller grass to climb up to give herself an advantageous position. The males do fly and rely on the glow to locate a mate, but do not themselves glow.

There is a second species of glow-worm in England, the rare Lesser Glow-worm *Phosphaenus hemipterus*. It has a restricted range in the Southeast of England which includes the High Weald AONB. This species, despite the name does not glow readily and is more active during the day, making it far harder to spot¹.

High Weald habitats

The High Weald's structurally diverse mix of habitats such as small woodlands with open glades, woody shaws, abundant hedgerows, and open grasslands and heath provide the right mix of habitats required for glow-worms. As these habitats are contiguous in the High Weald, they are particularly valuable to a species that does not disperse well across the countryside.

Glow-worms are found in a range of habitats, everywhere from hedgerows to railway embankments, and gardens to heathland. They have different needs depending on which stage of their lifecycle they are in².

They need places, such as woodland and scrub, which provide both cover in the larval stage and a moist environment for their primary prey species, small snails³. Dry and drought conditions can impact snail abundance, consequently limiting glow-worm numbers.

The larvae hibernate through two winters in this stage of their lifecycle, hibernating either underground or utilising space under logs and stones.

Everything changes for the adults, who require a more open environment such as grassland, grassy borders, and verges, or within woodlands, coppiced areas, open glades, and rides. Females cannot fly, they climb up longer grass stalks to attract a mate¹. More open environments help the females to be seen and the males to reach them.

Where to see glow-worms in the High Weald

Glow-worms are found across England; however East Sussex, Kent and West Sussex are all top recording counties. The National Biodiversity Network (NBN) Atlas⁴ (an online aggregation of biodiversity data for the UK) suggests that glow-worms can be found throughout the High Weald AONB, but the biggest concentrations are in the southern portion of the High Weald, particularly around Hastings, Battle and Broad Oak. To see glow-worms in the High Weald, the following locations are good places to start:

- Brede High Woods, nr Broad Oak in Sussex
[Brede High Woods \(highweald.org\)](http://highweald.org/brede-high-woods)
- Battle Great woods, near Battle
[Battle Great Wood \(highweald.org\)](http://highweald.org/battle-great-wood)
- Broadwater warren Nature Reserve nr Eridge in Kent
[Broadwater Warren, Tunbridge Wells \(highweald.org\)](http://highweald.org/broadwater-warren-tunbridge-wells)
- Hastings Country Park, Fairlight
- Ashdown Forest, especially around Coleman's Hatch
[Ashdown Forest \(highweald.org\)](http://highweald.org/ashdown-forest)

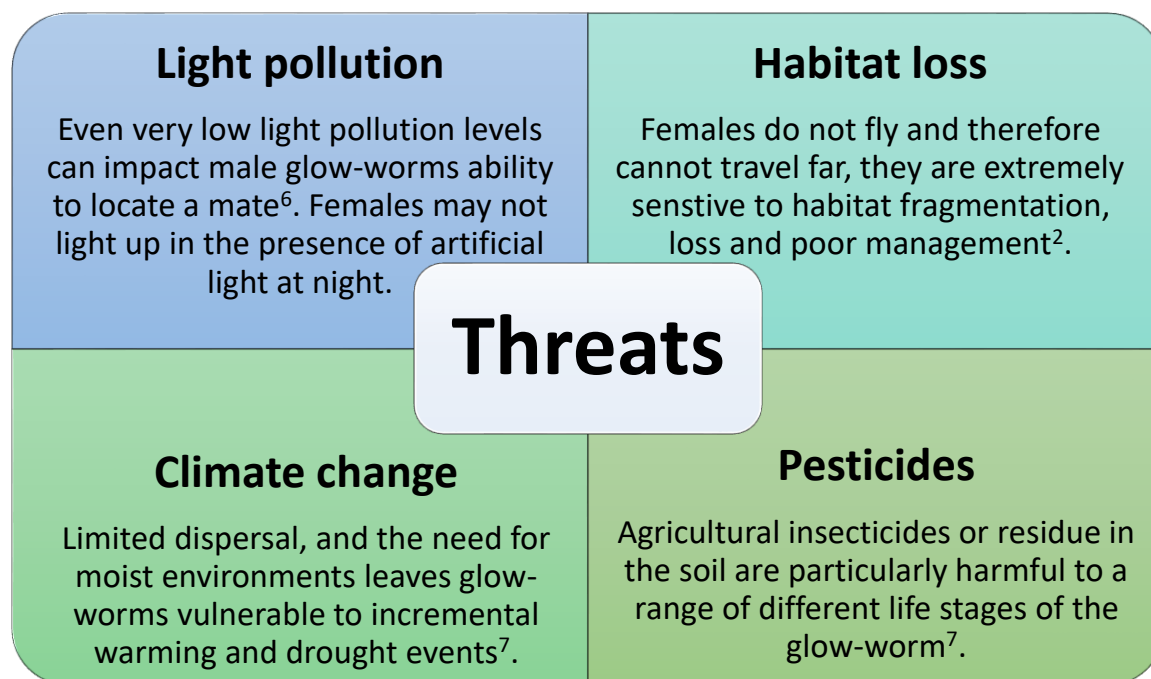
The best time to see glow-worms is generally between May and September, with June and July being the top months to spot them. Sites which are open with long grass, and also close to more dense growth such as hedges and woodlands are ideal, as glow-worms use a range of habitats in their life. Glow-worms are highly sensitive to light pollution, so selecting sites which are dark is essential. The best viewing time is late evening from 10pm. A torch or light source

might be required for safe navigation of paths but once the desired location has been reached, it is important to turn off any light sources so that glow-worms do not become confused, with males being attracted to the artificial light and females turning their glow off.

Report glow-worm sighting to www.glowworm.org.uk or www.brc.ac.uk. This helps those who study glow-worms to monitor populations and offer advice.

Threats

The common glow-worm has not been assessed by the IUCN Red List, and therefore it is currently not considered endangered². However, this does not mean that numbers are not declining or that the species is not threatened. The decline in the glow-worm population in the Southeast of England is estimated to be 3.5 % per year over the last 20 years⁵. This decline will almost certainly include the populations found within the High Weald AONB, however the High Weald is also a great place to still find them due to generally low levels of light pollution, and the unique matrix of small diverse habitats that characterise the High Weald.



High Weald AONB advice: supporting glow-worms

Best practice on habitat management for glow-worms often falls within pre-existing advice that the High Weald AONB team offers for a range of different habitats and land managers, from estate owners to farmers and gardeners. The advice for assisting glow-worms also supports a wide diversity of other plants and animals.

The High Weald advocates regenerative farming practices which emphasise a more holistic approach to farming and include reduced pesticide use, creating more diverse grasslands and using cover crops. All of these can help support the habitats glow-worms are found in.

[Regenerative agriculture \(highweald.org\)](http://www.highweald.org)

There are hundreds of small woodlands across the High Weald, sensitively opening them up with glades, rides, and other appropriate management such as coppicing, may be especially beneficial to glow-worms in ancient woodland⁸.

[Woodlands in the High Weald landscape \(highweald.org\)](https://www.highweald.org)

Glow-worms require longer grass to maximise females being located by males and therefore breeding success. Scruffy borders and edges of rough grassland with longer grass support glow-worms. The High Weald already encourages these types of areas because they can support such a diverse range of species.

[Managing rough grassland \(highweald.org\)](https://www.highweald.org)

Unimproved and semi-improved grasslands are some of the most diverse habitats in the High Weald. These grasslands can be managed as pastures or meadows, and with appropriate consideration of cutting times and grazing can easily support glow-worms, particularly around field edges.

[Manging wildflower grasslands in the Weald \(highweald.org\)](https://www.highweald.org)

The High Weald AONB already advises against cutting grass at the height of summer in many situations, especially in gardens – this helps glow-worms during the height of their breeding season¹¹. Campaigns such as ‘Glow not Mow’ have been success in neighbouring areas such as Brighton and Hove Council.

[High Weald at Home: put the wild in your garden](https://www.highweald.org)

Glow-worms and dark skies

The High Weald Partnership takes the preservation of dark skies across the protected landscape seriously and produces guidance for individuals and land managers. Dark skies will be included as a component of the High Weald’s natural beauty in the next AONB Management Plan due in 2024. In the meantime, the High Weald AONB Partnership continues to collate information on the importance of dark skies to a range of species found within its landscapes, and this includes glow-worms.

Glow-worms are affected by artificial lights at night (ALAN) in a number of ways. This can lead to a reduction in breeding success, which can ultimately cause population loss of this iconic species:

- Males have been observed to be confused by ALAN, being attracted to the artificial light over female glow-worms, even at low-light levels⁹.
- Male glow-worms are sensitive to modern LED lights, regardless of whether these are cold or warm light. White light has a broader light spectrum than old-fashioned sodium lights - which have a narrow orange colour spectrum - but are now ubiquitous in both streetlamps and decorative garden lighting¹⁰.
- Females rely on sundown as the environmental cue to glow, and therefore light pollution which may obscure the setting sun can lead to female glow-worms not lighting up¹¹.

It's not a wrap-up, it's a Glow-up

Glow-worms are an iconic species found across the High Weald. Many remember glow-worms from their childhood but may not have seen them in more recent years. Unfortunately, there is little data on glow-worm populations across England, although several recent scientific papers have shone a spotlight (pun intended) on population declines, the negative impacts of modern artificial lighting and other threats to glow-worm populations globally.

The High Weald is in a unique place, because firstly it stretches across some of the most glow-worm abundant counties in England, but also because the special components that make the High Weald so important are also some of the same habitat qualities that support glow-worms. Glow-worm sensitive management of sites that are known to support them, education, especially around the importance of maintaining dark skies, and reporting glow-worm sighting are all important to supporting populations of glow-worms found in the High Weald

References

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