



Badgers and Hedgehogs



Badgers on the increase:

Recent research (Judge et al. 2017) estimates that there are now 485,000 badgers in England and Wales. This is almost double the estimate for Great Britain in the 1980s, suggesting a substantial increase in number, with more than would be expected given their body size. Changes in farming practices favour badgers with large scale production of maize. This is a good food source for badgers, enabling them to enter the winter in a healthy state. Warmer, wetter weather now also means higher cub survival rates.

The urban landscape:

One study (Williams et al. 2018) found a non-significant trend for badgers to negatively affect the presence of hedgehogs in gardens. However, across amenity grassland sites, hedgehogs have only been found to show avoidance to badger odour for up to half an hour (Ward et al. 1997). People putting out supplementary food in gardens could be an important factor, with both predation and competition for food being reduced due to high levels of 'easy' food being available.

Badger culling:

One study (Trewby et al. 2014) found that hedgehog numbers more than doubled on amenity grassland areas following the **Randomised Badger Culling Trial** (but the study was data deficient for pastoral areas). However, this unsurprising finding does not justify culling badgers to increase hedgehogs. The data is limited and culling any native species for the benefit of another is an undesirable last resort. This is compounded by the fact that scientific evidence suggests that current badger culling for TB purposes may actually be making the situation worse (as new and potentially infected badgers move into the vacated territory, further spreading TB). Read the position statement from the PTES and BHPS: <https://ptes.org/campaigns/hedgehogs/hedgehogsandbadgers/>.

These two mammals have a complex **Asymmetric Intraguild Predatory Relationship**. Badgers can predate hedgehogs, and are the only native predator in the UK capable of opening them up when rolled. Badgers also compete for the same food source, macroinvertebrates (one badger eating 5x the amount as one hedgehog). However, when the habitat is good, and there is a plentiful food supply, these animals can, and do, coexist as they have done for 10,000 years.

With badgers on the increase, and hedgehogs on the decrease, badgers have often been given the blame for hedgehog decline. However, it is unlikely that they are the main driver. Hedgehogs are also declining in rural areas with low badger densities (e.g. East Anglia), so there must be other principal drivers of the decline.

Hedgehogs may alter their behaviour and avoid areas with high numbers of badgers. For example, released hedgehogs have been found to disperse away from areas with high badger density (Doncaster et al., 1992). Female hedgehogs have been found to avoid larger back gardens of detached houses that contain more habitat features selected by badgers, choosing safer habitats to rear their young (Dowding et al. 2010). Where there is a high density of predators, agricultural habitats may represent **landscapes of fear**, with hedgehogs seeking cover amongst edge habitat (Hof et al. 2012).

Built areas (e.g. suburbs) potentially act as **refuge habitat** for hedgehogs, being used less often by badgers. However, where badger sett density is high surrounding these areas, hedgehog presence and abundance has been found to decrease (Young et al. 2006), with badgers thought to limit movement between areas of suburban habitat.

Instead of pitting one species against the other, we should be focussing on restoring and improving habitat for both. Reduced ploughing, organic farming and smaller fields with hedgerows and margins would improve agricultural land, increasing food availability, shelter and connectivity. These can also be improved in urban refuges by having features such as wilder areas and hedgehog holes in gardens.

www.helpforhedgehogs.co.uk

Hedgehogs on the decrease:

The latest statistics (Wilson & Wembridge 2018) show that hedgehogs have declined by a third in Britain since the Millennium. The decline is steepest in rural areas, by up to 50%. Changes in farming practices are problematic for hedgehogs, with intensive monoculture, heavy chemical use, and ploughing all reducing food supply. The removal of hedgerows has taken away food and shelter, and cover for them to use to navigate the landscape. Poorly lit, high speed roads associated with higher roadkill are also more prevalent in rural areas.

The rural landscape:

In a recent study (Williams et al. 2018), neither hedgehogs nor badger setts were found in a quarter of over 250 rural sites across England and Wales, suggesting that parts of our rural landscape are not suitable for either species. Unsurprisingly, hedgehog presence was negatively affected by badger sett density but where hedgehogs were present, badgers also coexisted 49% of the time. Hedgehog presence was positively affected by the amount of built land.

Other predators:

Foxes can predate hedgehogs, and a negative relationship between hedgehogs and both badgers and foxes has been found based on roadkill data (Pettett et al. 2018). An adult hedgehog is formidable prey though, and hedgehogs are probably more likely taken as carrion by foxes. Young hedgehogs can occasionally be taken by birds of prey and hedgehogs are sometimes attacked by dogs and cats.

