



## **BCTGA Biodiversity Study – Members Results** **Mammals in Christmas Tree Plantations**

### **Mammals, Amphibians and Reptiles – Good and Bad**



The number of mammals visiting Christmas tree plantations was assessed via a survey sent to BCTGA members in September 2022. Responses were received from 40 sites, of which plantations of 3 to 9 hectares were best represented. The West Midlands, the Southwest and Scotland provided the most reports, with an additional two each in the North, Wales and Northern Ireland, four in the East of the country and one in the South East.

Among the small mammals, bats were the most noted species in these surveys, with field mice also found to be abundant. The latter counts may have included the endangered harvest mouse.

Rabbits and hares were, unsurprisingly, the largest number of medium-sized mammals encountered. Grey squirrels also featured in numbers, even though they do not favour a conifer tree environment. Weasels, stoats and hedgehogs all made an appearance in a good number of sites, with red squirrels and polecats being found in four sites each.

The large mammals category was dominated by roe and muntjac deer, with badger and to a lesser extent red fox following after.

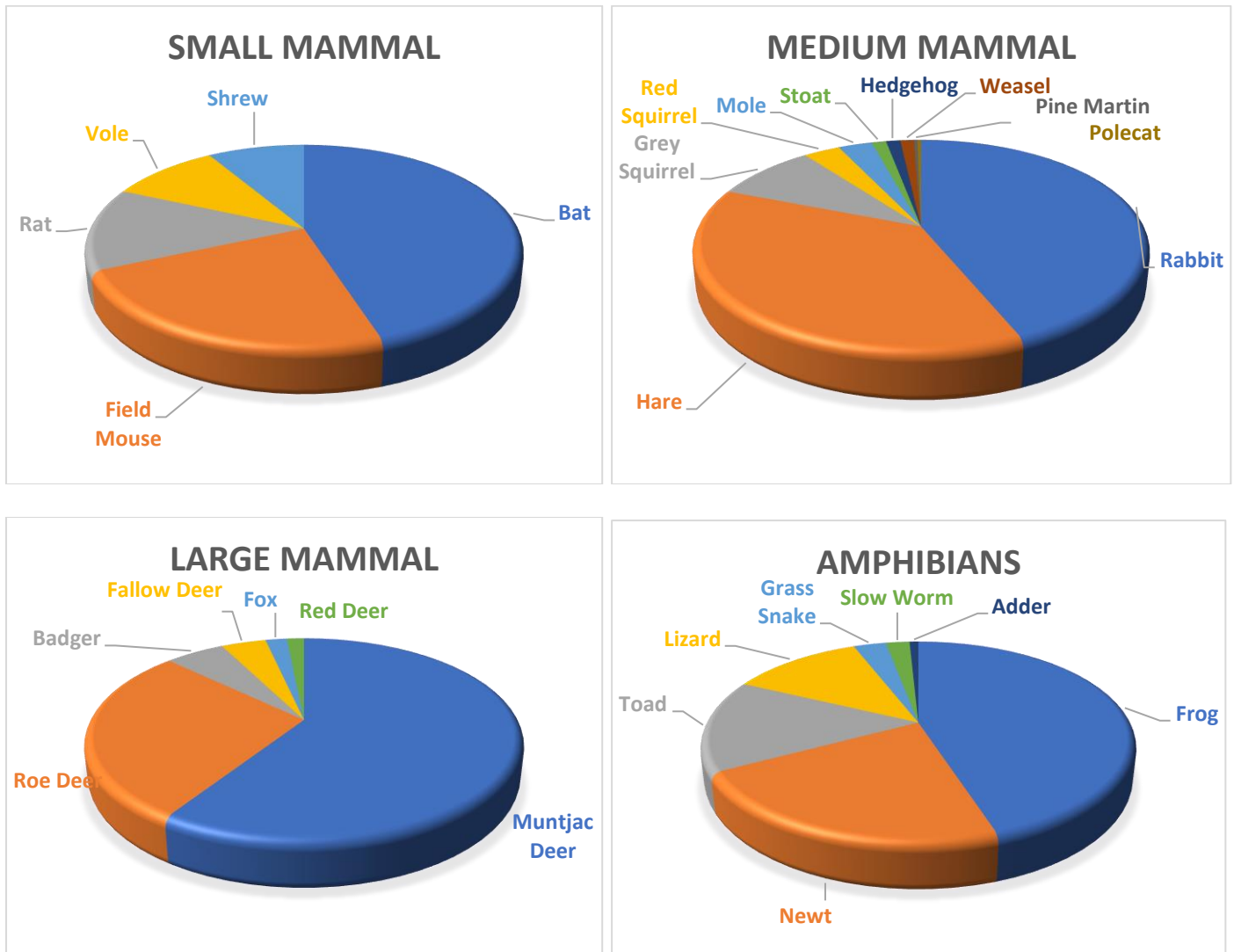
For amphibians and reptiles, toads and frogs headed the list with 27 sites recording 1,524 frogs. Fewer in numbers but still present at quite a number of sites were newts, lizards, grass snakes and slow worms.

The table below shows the top 10 mammals and amphibians sighted:

<b>Species</b>	<b>Total Sightings</b>	<b>Sites</b>	<b>Average Sightings</b>
Muntjac Deer	3119	13	240
Rabbit	4668	31	151
Hare	2820	22	128
Bat	3067	24	128
Roe Deer	2839	25	114
Field Mouse	1995	30	67
Frog	1524	27	56
Rat	602	16	38
Grey Squirrel	758	25	30
Newt	195	7	28



The charts below show average sightings reported:



### Conclusions from the member survey

Of the mammal species identified in Christmas tree plantations, there is a divide between those that are beneficial to the crops and those that have detrimental effects.

The latter – deer, rabbits and hares – can be controlled by fencing that does not prevent access by the more beneficial species. To an extent, badgers have to be classed with the destructive species because that can destroy fencing designed to keep the others out.

Mammals that do contribute positively to a Christmas tree plantation are bats, which include aphids and other insect pests in their diet. Stoats, weasels and polecats predate on rabbits and rodents that could damage the trees.

Many of the other, non-harmful species, such as hedgehogs, red squirrels and harvest mice, have been in decline in the British countryside, so providing habitat that assists their survival, and the promotion of invertebrates and seed- and fruit-bearing plants, will help these animals. Hedgehogs, in particular, consistently top polls of the British public's favourite mammal, so their preservation is good PR as well as making a constructive contribution to improving ecosystems.



## **Management strategies to promote mammal and amphibian biodiversity**

### **Species which are helpful**

*Weasels, stoats, ferrets, polecats, pine martins and foxes which eat rabbits (and hares).*

All of these mammals are good climbers and will easily surmount a standard 900mm fence to locate their prey, so no inputs required to encourage them.

### **Species which are not a nuisance and are compatible with the trees**

*Species in decline such as hedgehogs, harvest mice and red squirrels plus any reptiles and amphibians.*

Hedgehogs will be unable to cross rabbit fences, but a bowl of water on the outside may be appreciated.

Any large discard trees with cones will encourage red squirrels in areas where they continue to survive.

Harvest mice inhabit hedgerows and long grass, so leave a meter of grass adjacent to any hedgerows unmowed.

### **Species which we can possibly live with, but need some management input**

*Badgers and voles.*

Badgers are robust creatures well able to burst through rabbit fencing leaving holes for rabbits to enter. However, they tend to be creatures of habit, preferring to enter or leave by the same route. A solution worth considering is to insert badger gates in the fence at their preferred routes. These should be top hinged and around 30cm wide and 25cm deep and need to remain weed free to allow easy swinging.

Voles mostly damage the base of deciduous trees but can also attack conifers. They are extremely wary of predators and prefer to feed where protected by ground vegetation, so are deterred by maintaining a weed free spot around the base of the tree.

### **Species which need to be kept out**

*Rabbits, hares and deers.*

Rabbits and hares are best excluded by rabbit fencing either dug into the ground or having 15cm folded outwards to deter burrowing under the netting. Deer can be excluded with deer fencing, but this is a major expense, so consider a barrier spray could be considered, these are effective for around 6 months.