

Gosforth Park Nature Reserve – Bat Box Scheme 2013-2015.

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Introduction

The Natural History Society of Northumbria has managed Gosforth Park Nature Reserve since 1929. This beautiful 1km x 1km wildlife refuge in the north of Newcastle has a shallow lake, extensive reed bed and mixed woodland.

Studies of different mammals have been undertaken over the years but not much is known about the bats that forage and roost there. In the light of this, 38 bat boxes were installed in 2013, eight boxes in July and then a further 30 at the beginning of September (see Figure 1). The boxes used were 20 Schwegler Woodcrete boxes of three styles (ten 2DFDP, five 2F and five 2FN) and 18 wooden boxes based on the Warwickshire bat box (WBB) (see photograph, from left to right, box style 2DFDP, 2FN and WBB).



The eight boxes that were put up in July were checked in September 2013 and it was with much surprise that a solitary male soprano pipistrelle *Pipistrellus pygmaeus* in breeding condition was found in one of the Woodcrete boxes. The boxes were checked in October 2013 and a further two solitary males were found in separate boxes and in the same box as the one the solitary male was found in during the September check, there was a cluster of soprano pipistrelles, one male with four females.



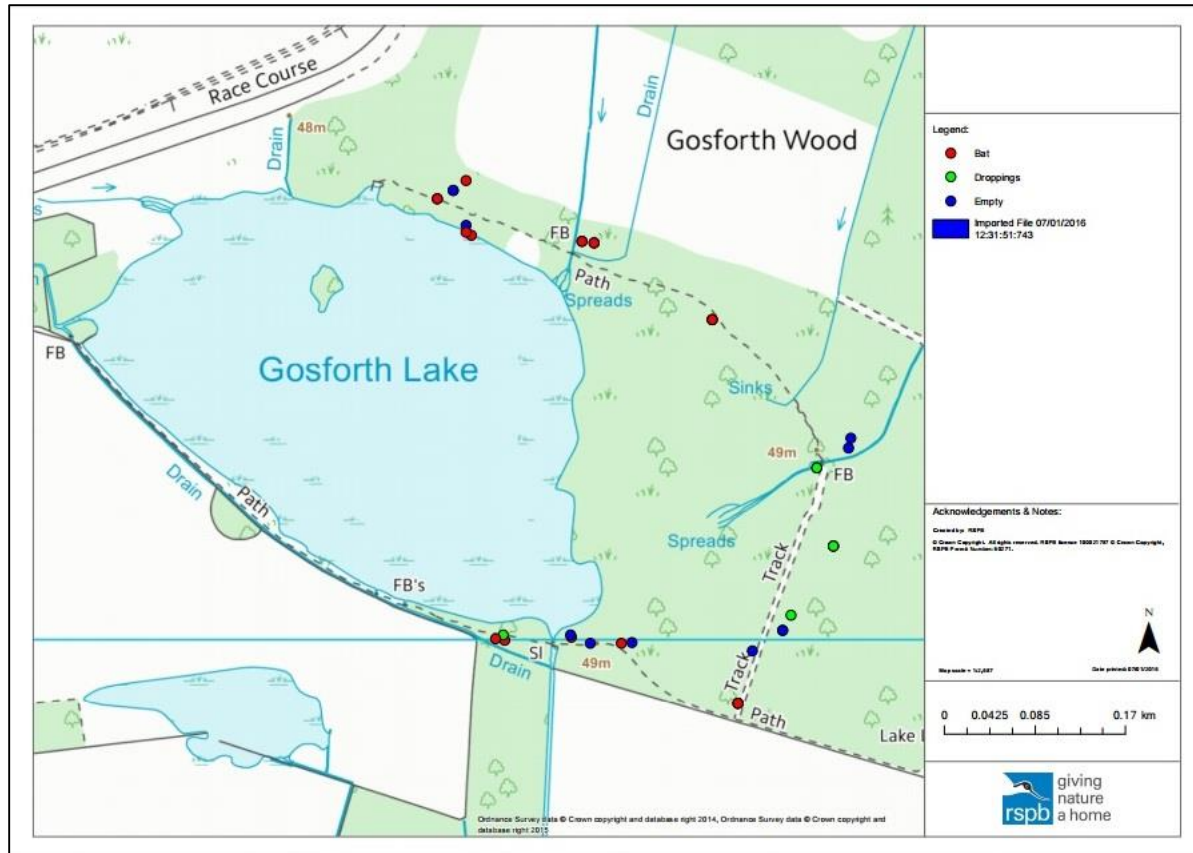


Figure 1 Bat box locations with occupancy.

Results

During 2014 the boxes were checked on four occasions, once each in the months of April, August, September and October. The total number of boxes occupied by bats was nine. In addition to these nine, a further five boxes had evidence of occupancy (i.e. droppings in box), bringing the total of boxes used, at the end of the 2014 season, to 14.

Three bat box checks were carried out in 2015, once each in the months of May, August and September (April and October were too cold). There were ten boxes occupied by bats and an additional 13 boxes had droppings in but no bats present. This brings the total number of boxes used during the 2015 season to 23.

The results for all three years together make for more interesting reading and the charts later in this report give a breakdown of occupancy by box type, aspect, tree type, sex and age ratios and the months that a higher number of bats were seen.

The only species to have been found in the boxes is the soprano pipistrelle although not all the droppings collected have been DNA tested.

The total number of boxes occupied by bats is 14 and the number of boxes with droppings but no bat seen is 11 and all but the 2FN woodcrete boxes have been used by bats – the 2FN had droppings in one box, once only. This brings the total of boxes with either bats or droppings found to 25. The total number of bats that we have encountered is 47.

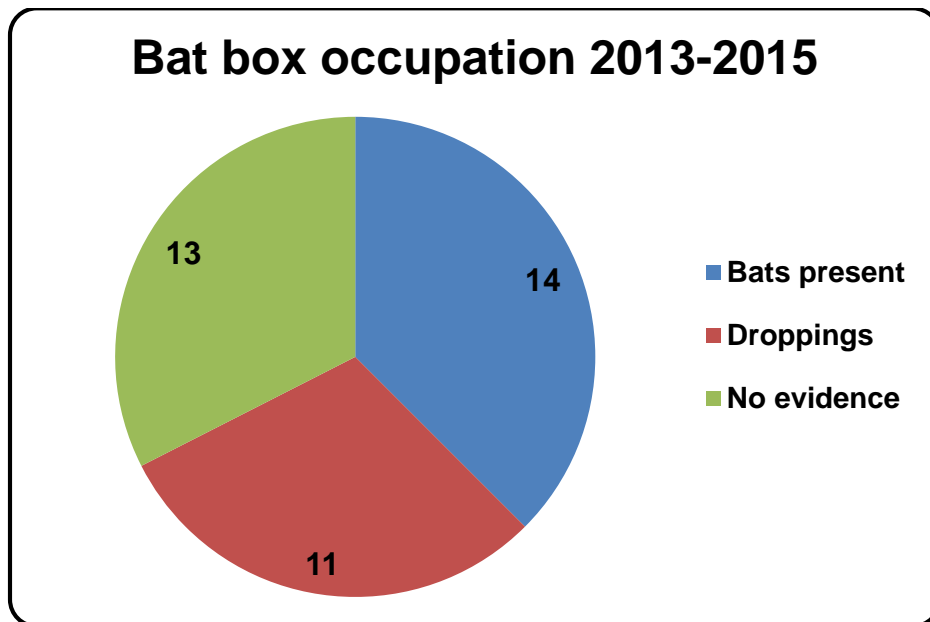
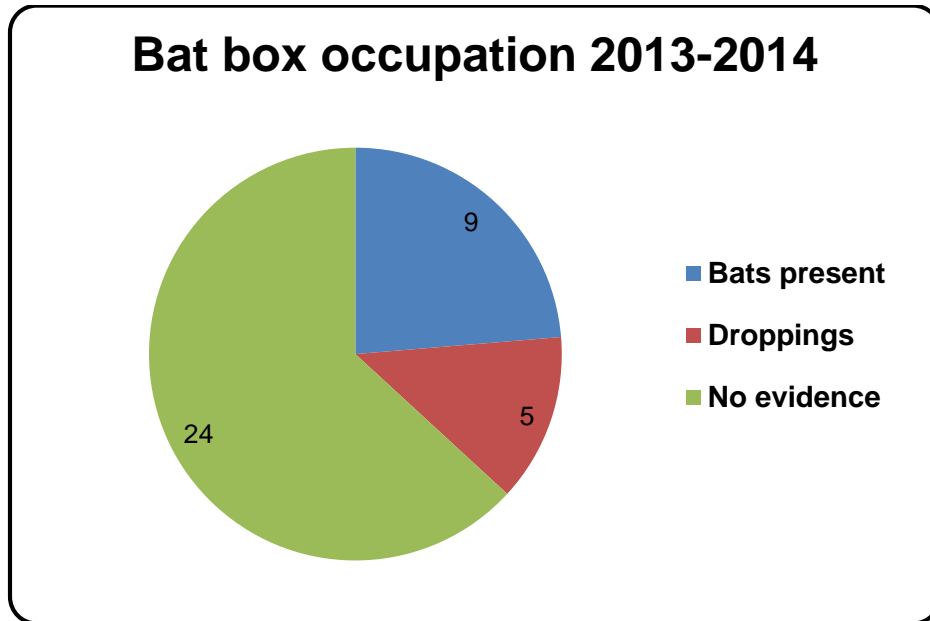


Figure 2 Bat box occupation.

Total bats counted in 2013 = **8 (4 males/4 females)**
 Total bats counted in 2014 = **19 (4 males/15 females)**
 Total bats counted in 2015 = **20 (11 males/9 females)**

Total bats counted 2013/2014/2015 = 47

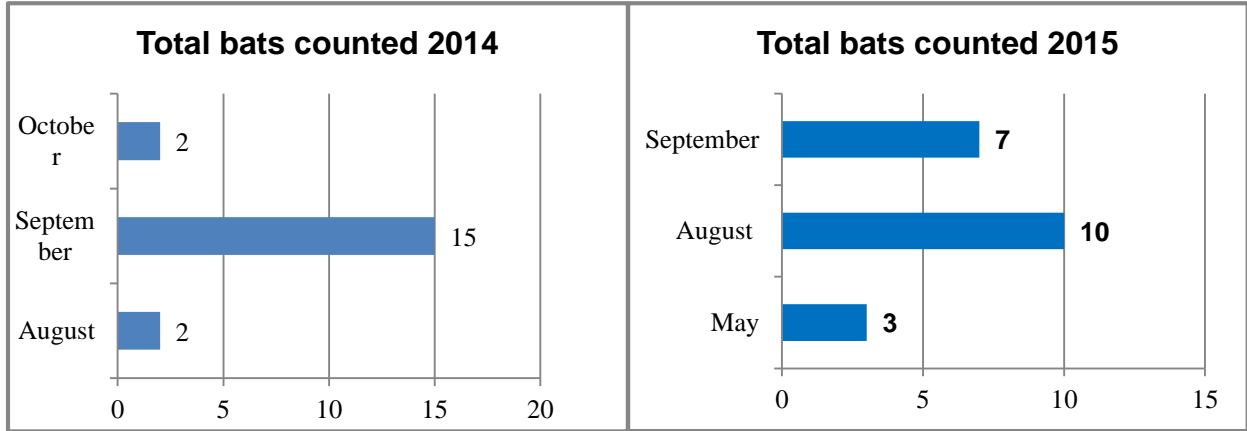


Figure 3 Total bats counted.

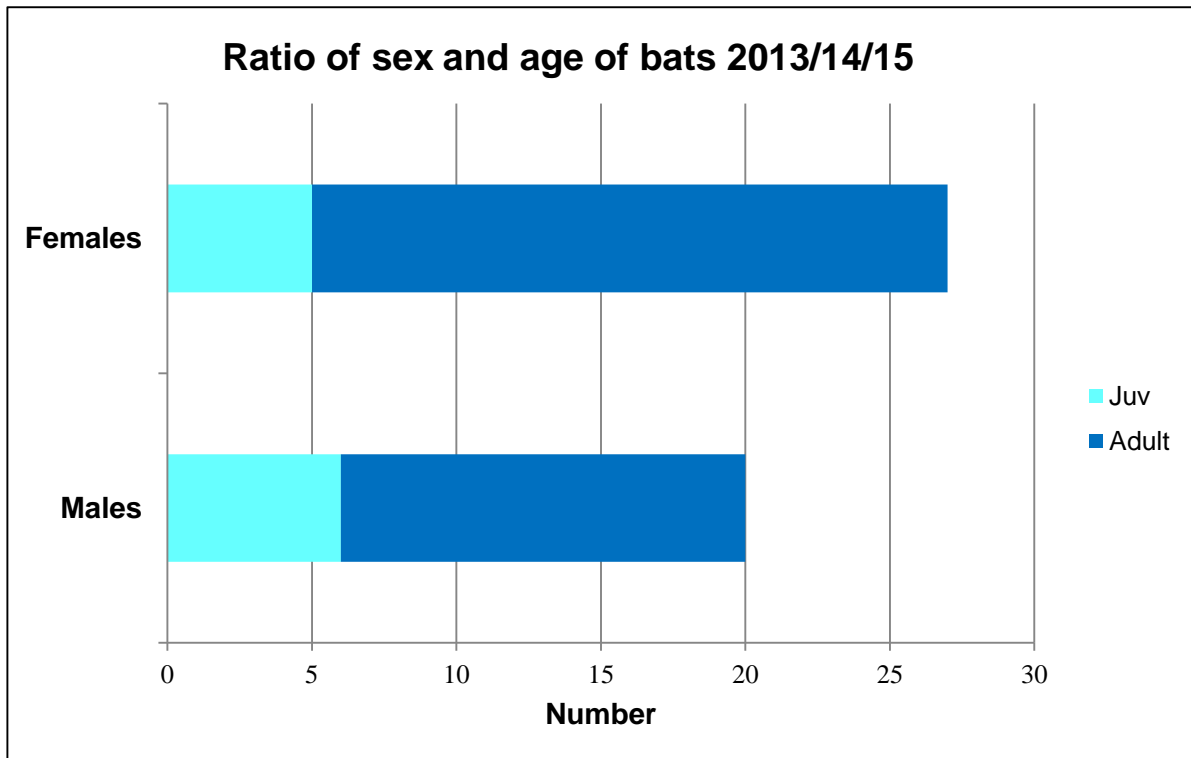


Figure 4 Ratio of sex and age of bats 2013/14/15.

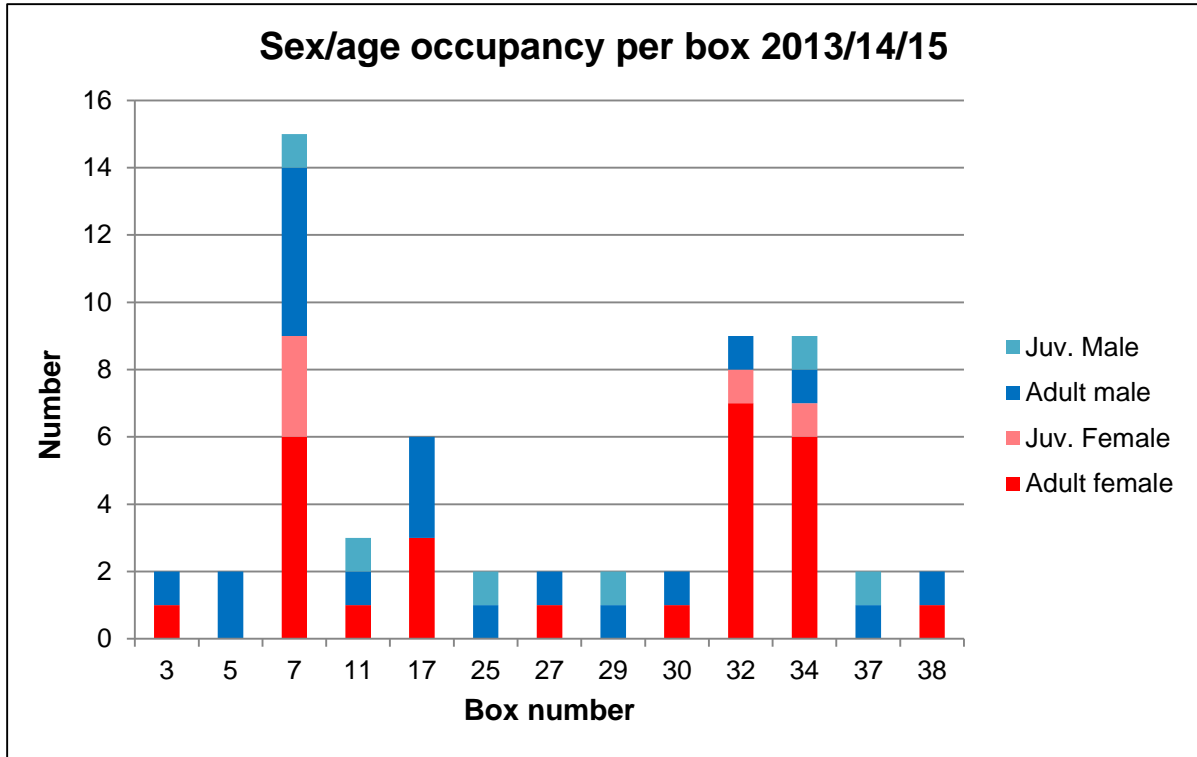


Figure 5 Sex/age occupancy per box 2013/14/15.

Most used box types: Woodcrete 2FDFP and 2F and wooden (WBB)
 Least used **Woodcrete 2FN**



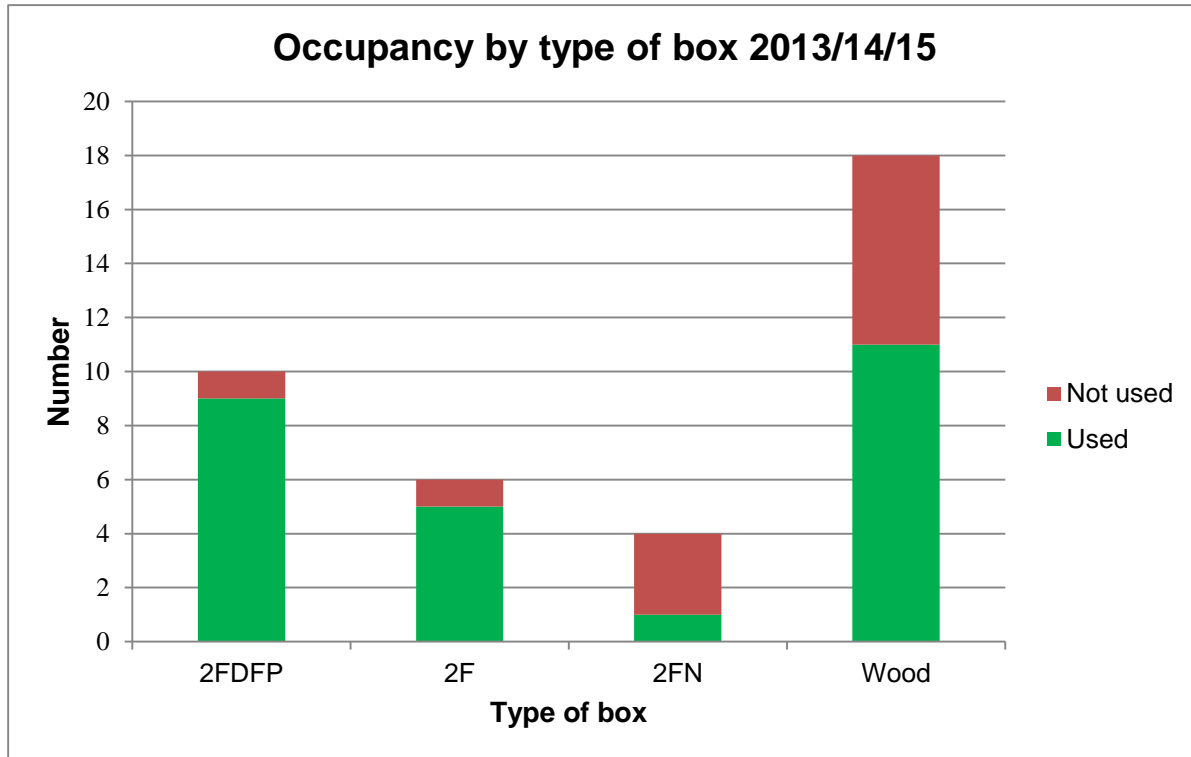


Figure 6 Occupancy by type of box 2013/14/15.

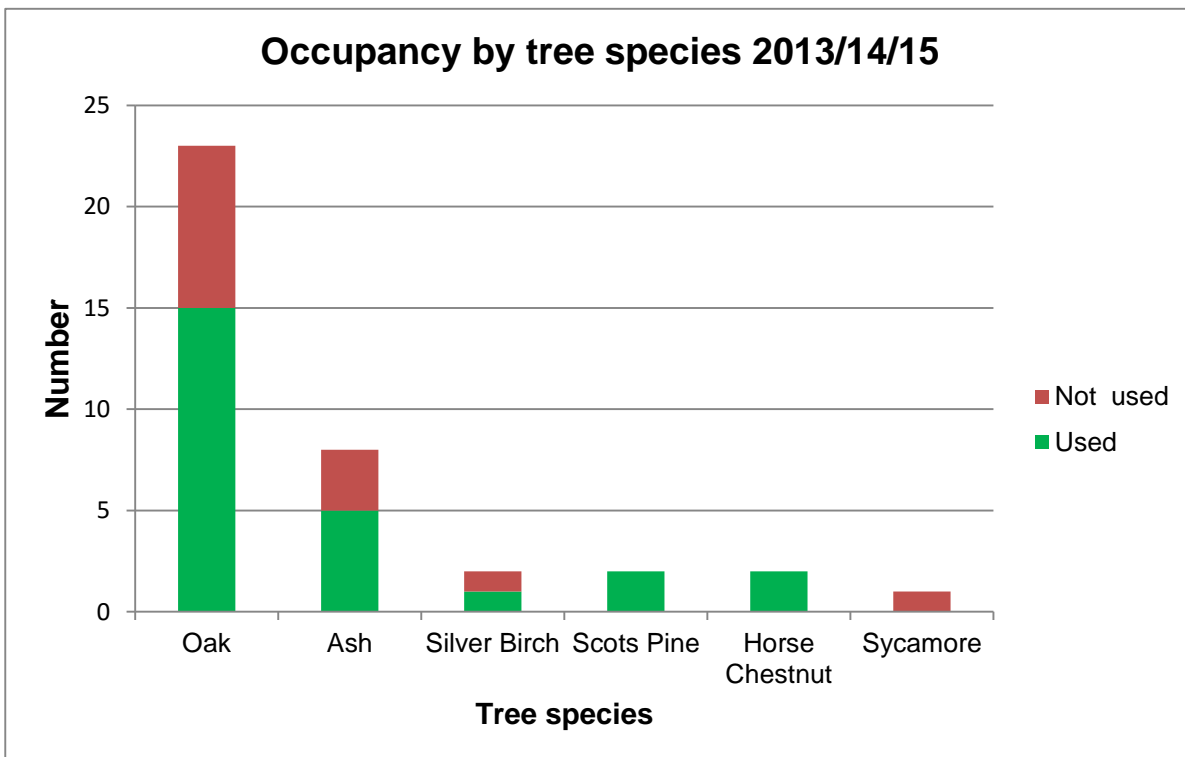


Figure 7 Occupancy by tree species 2103/14/15.

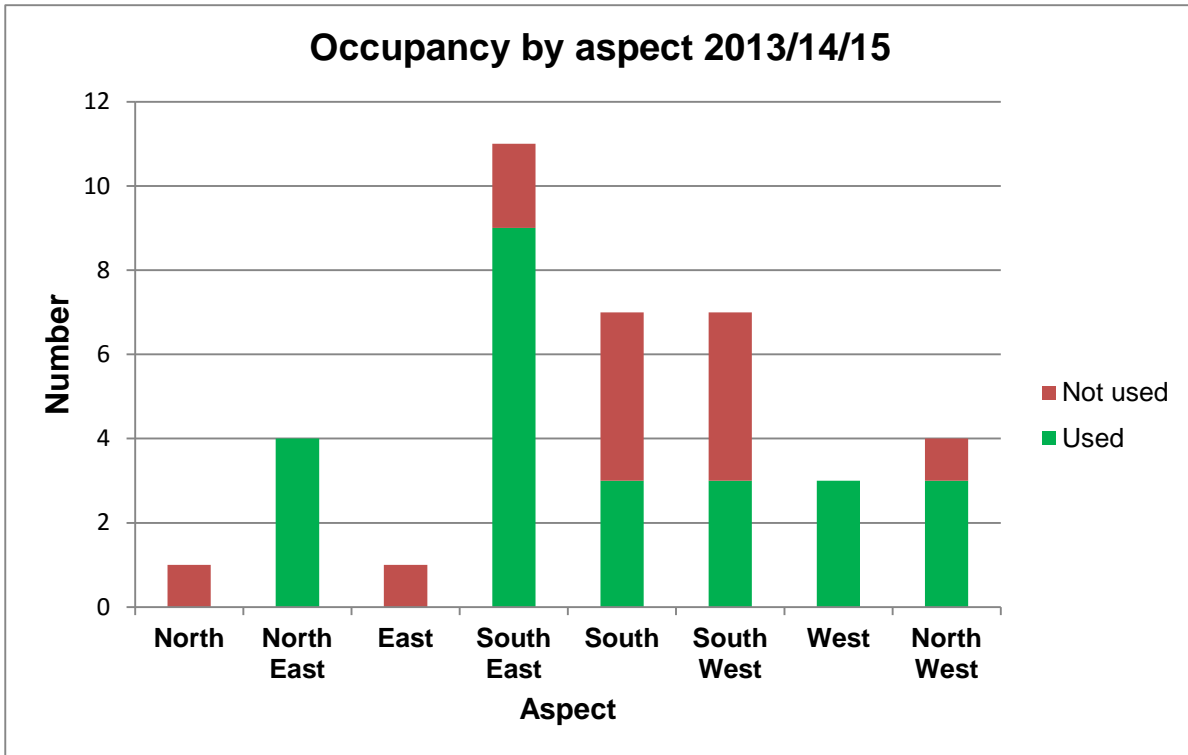


Figure 8 Occupancy by aspect 2013/14/15.

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