

**Threestoneburn Plantation
Wooler, Northumberland**

Mammal Survey 2007

Prepared
for
Scottish Woodlands Ltd

by
E J Steele
Ornithological and Mammal Surveyor
Heathfield
Hillside East
Rothbury
Northumberland
NE65 7YG

Tel 01669 620418
Email john.rothbury@gmail.com

1 Introduction;

1.1 The Site

This former 700Ha Forestry Commission plantation lies in a broad upland basin within the eastern flank of Cheviot Hills. The site is situated at an elevation of between 300m and 714m above sea level with the majority of its aspect being north easterly on steeply sloping ground. Hedgehope Hill at 714m, the second highest hill in the Cheviot range, is located at the site's south western corner. Its high southern boundary is completed by Dunmoor Hill (569m) and Cunyan Crag (473m).

Small scale planting commenced in 1967 with the majority of the planting done in between 1971-75 followed later by peripheral planting between 1979 and 1982. The bulk of the trees planted were of Sitka Spruce with small pure and mixed stands of largely Lodgepole Pine and Japanese Larch, the latter often being planted in 15m wide edges to the Sitka blocks adjacent to rides in the central area of the site.

Extensive open areas exist within the site amounting to approximately 100Ha. These are largely confined to the high ground on the southern boundary and are of wet and dry heath communities with a small amount of blanket bog. Other smaller areas exist in the form of the river corridor of the Threestone Burn, the rides and road verges and the in-bye grazing land adjacent to Threestoneburn House. Several 1-2 Ha blocks were cleared of trees in 2002 for conservation purposes.

Three ponds and several wetland habitats have also been created on site since the planting was concluded.

Small scale planting of deciduous trees within the main river corridor was carried out in 2003.

2 Project Brief and Method

2.1 Project Brief.

To undertake a "presence or absence survey" of the mammals within the site boundaries with no attempt at assessing population sizes.

To assess the potential re-colonisation of species once felling is completed.

2.2 Method.

Most rides and roads were walked over 7 days (17 April, 4, 9, 14, 22, 23 May, 13 June.) and all signs of mammal's seen to be using these open areas and the adjoining trees were noted on 1:10000 scale maps.

Within the open larch and pine areas surveyed, signs of use were noted.

In dense Sitka stands, edge trees were checked every 500m approximately.

Large open areas were walked along a 200 metre interval transect line that fully traversed each area.

All water courses, ponds and flushes were checked for occupation.

One 3 hr. observation session was carried out on the 14th May starting at 19.30hrs to detect crepuscular and nocturnal animals.

An electronic audible bat detector was used to locate feeding bats from a slow moving vehicle on all accessible tracks. The course of the main burn, incorporating the ponds, was also surveyed on foot from the eastern boundary to the bridge.

3 Results

3.1 Site Survey Map

A map is appended detailing the locations of specially protected species and other mammals encountered.

3.1.1 Specially protected and threatened species

The following abbreviations are used in relation to legal and conservation status;

- W. Protected under Schedule 5 of the *Wildlife and Countryside Act* 1981 as amended
- Wp. Partial protection in the above schedule.
- S. Listed on the *UK Steering Group* short list
- RDB. Red Data Book (published by the Mammal Society 1993)

Red squirrel. (S,W, RDB).

Feeding signs were picked up throughout the site. Stripped cones of Sitka spruce, lodgepole and a few Scots pines together with those of Japanese larch were used to identify the species occurrence. No squirrels were seen during the survey but a skull of a red squirrel was found under mixed conifers on the northern boundary. Population size was to be assessed by other surveyors.

Otter. (S,W,RDB)

Signs were only found on the main burn and only adjacent to the ponds area upstream and downstream of the bridge. Sprainting (faecal droppings) points were found at 7 different locations over 400m of burn. Locations varied from under secluded overhanging banks, under the bridge itself and to small piles of sand drawn up to a height of 100mm for the purpose. Footmarks and a short trail of an adult (probable male) were seen here on the 17th April. Fresh spraints containing amphibian bones were found at the out fall of each pond on this date. The remains of a mallard duckling were found just inside the entrance to an artificial holt on the middle pond. This could have been attributable to this species, especially as fresh spraint was also present at the time. Despite careful searches of other likely places no other signs were recorded.

Bats species.(W, RDB)

3 bats were found. 2 concrete bat boxes that were installed in the plantation in 2003, remain unoccupied.

Common pipistelle (*Pipistrellus pipistrellus*). 2 were feeding and interacting near the large pond early in the session. This would indicate that they had not travelled very far from their roosting place.

***Myotis* bat species.** One whiskered or Brandt's bat was found foraging alongside conifers on a ridge near the eastern boundary.

Water Vole (S, RDB)

Despite targeting habitats used by this species, no evidence was found of its occurrence on site. A 2002 survey of 50 sites in the Cheviot Hills by the Northumberland National Park Authority located only one active site 10 km away.

Badger (W, RDB)

Not found. No evidence of badger activity was found (eg latrines, scrapes, footprints or setts).

Pine Martin(W, RDB)

Not found. Despite an anecdotal record recently, no signs were detected.

3.1.2 Other Species including some RDB (only) species as indicated

Rodents.

Field vole signs were found frequently on all ride and road verges mainly in the form of their runs. Occasionally individuals were seen. Two skeletal remains of this species were found during the survey.

Three wood mice were seen on the track to the house and evidence of probably this species was found from the occasional stripped cone hidden under dense cover.

Lagomorphs.

Rabbits in small numbers were confined to the area around the house as far as could be ascertained.

Brown hare (RDB) were seen on three occasions and always close to the boundary of the site. They appear to be using the edges of the site adjacent to open ground for shelter.

Shrews.(RDB)

Individual dead specimens of both pigmy and common shrews were found. No trapping for these species was undertaken.

A single water shrew was seen in torch light in the Threestoneburn on the eastern boundary of the site.

Hedgehog(RDB) The faeces of this species were found near the house.

Mole. Signs were common and widespread. The highest observation being near the summit of Dunmoor Hill.

Roe deer. Signs in the form of droppings, browsing and fraying were noted frequently throughout the site including the large open areas. Deer were seen on 9 occasions.

Fox. Evidence of this mammal was rarely seen. Only 1 fresh dropping was seen along with 2 very old ones. Some old woodcock kills may be attributed to this species.

Weasel. Droppings of this species were found at one location near the southern cattle grid entrance.

4. Evaluation of Mammalian Interest and potential for re-colonisation.

4.1 Introduction

Threestoneburn Plantation is a 25-35 year old stand of conifers and has to date provided a succession of habitats during its varied growth and development. This has in turn provided opportunities for a succession of mammal communities. 3

The present colonists represent a phase in the shifting fortunes of individual species with some having only recently arrived to exploit new feeding opportunities (eg. red squirrel and bats) whereas most others have probably always been present in small numbers (eg otter). Others, in varying numbers, would have been present prior to planting with some taking advantage of the habitat changes (eg, roe deer, field vole and the shrews.) Few will have been disadvantaged and retreated to some degree (eg brown hare)

4.2 Schedule 5 species

The plantation itself currently holds Schedule 5 species. The species involved are red squirrel, otter and at least 2 species of bats. They are all specially protected, carrying a greater management responsibility particularly in avoiding disturbance to the dwelling and breeding locations.

4.2.1 Red squirrel. Of the four species, the red squirrel has the most to loose in the future felling proposals. The population has developed over a relatively short period presumably from pioneering animals following the tree lined Lilburn Burn and into the developing wood. They will have likely crossed open country from other adjacent valleys as well. Clearly red squirrels are largely arboreal in their choice of habitat but contrary to the popular belief it is apparent that pioneers will travel across open country on the ground. They have been seen at least 3 kilometres from trees in the Cheviot Hills (personal observation) and game keepers have inadvertently trapped occasional individuals in tunnel traps in similar moorland habitats.

The reverse movement is therefore probable during the felling and given the extensive tree planting in the Lilburn Burn, Harthope Valley and Breamish Valley in the last 12 years, some mitigation in terms of new woodland habitat will have been provided locally.

4.2.2 Otter. As part of the River Tweed catchment and its fishery, otters have been well documented as being present. Whilst otters would have inhabited the area in the past, hover and holt sites would have been at a premium in this upland habitat. The incorporation of ponds in the original planting scheme and the recent installation of an underground artificial holt have added to the sites value for the species in terms of feeding and breeding opportunities. The ponds and watercourses should be retained and left undisturbed during future management.

4.2.3 Bats. Little is known about bat occupation of the uplands but recent observations have identified massed autumnal foraging by bats over heather moorland. This suggests a possible dependence on such habitats for local or long distant migrant species and ultimately may be of benefit to same.

It is clear from this brief survey and work done in Keilder and other forests, that bats will utilise upland conifer blocks for foraging, if they are accessible from their roosts. The age and structure of the plantation would not be conducive to permanent breeding roosts but is clearly being used for foraging. The roosts of the bats seen are likely to be in cavities in

old deciduous trees and in Threestoneburn House or The Dodd buildings, all of which are off site and not affected by the proposals. The removal of the sheltering conifers and their insect fauna would reduce feeding opportunities for the expectedly small numbers of local bats but the developing burn side trees and any future planting would help to offset this. The extensive tree planting downstream of the site in the Lilburn Burn will also have a mitigating affect.

Water vole. Being almost extinct in the Cheviot Hills, it is unlikely to be on site at present. However it is possible that the site just might hold a small population in an isolated flush or burn side bank, so caution should be exercised during felling to avoid these locations.

Badger. It's probable that badger is present on site without having been detected, given the reasonable population levels in the surrounding valleys. Care will need to be exercised as any proposed felling proceeds so as not to interfere with setts.

Pine martin. No clear evidence is available for its occurrence on site. Recent evidence from an adjacent valley suggests that animals may be present in the Cheviots. These creatures den mainly in tree and other cavities. The site is unlikely to provide such habitats given the trees' age structure and the absence of suitable crags.

4.3 Other Species

Rodents.

Field vole . Numbers of this species will increase as the habitat reverts to open fell.

Lagomorphs.

Rabbits This species seems to be extending its range further into the hills recently and will be unaffected by the proposals

Brown hare (RDB) Ultimately the recreated habitat will benefit this species.

Shrews.(RDB)

Pigmy and common shrews. These species will gain from the new habitat.

Water shrew. This species will gain from the greater extent of wetlands opened out after felling.

Hedgehog(RDB)A probable net gain for this species.

Mole. A gain for this species

Roe deer. There will be a loss of undisturbed habitat for this common species that occurs frequently on open fell. Recent tree planting locally will provide winter shelter for some animals.

Fox. No change in the status of this species is expected.

Weasel. With the increase in available rodent prey this species may increase.

4.4 Potential re-colonisation of the site following felling.

4.4.1 Introduction

Prior to the acquisition of the farm by the Forest Authority in the mid 1960's the farm was treeless save for a few specimen trees near the farmhouse. Clearly, from local knowledge and the vegetation that remains unplanted, the farm had a mosaic of diverse moorland habitats including blanket bog, wet and dry heath, acidic and neutral grassland with springs, flushes and burns and some rocky outcrops. It is not improbable to suggest

that many of these habitats will reappear in modified form for mammals to utilise. This has been the case in a nearby smaller scale reversion of plantation to moorland.

4.4.2 Potential colonists .

It is anticipated that no new colonists will appear following tree removal. The predicted fortunes of each species have been described above. However all open country species will significantly gain by the proposed felling, many of which are prey species for avian predators(eg kestrel and shorteared owl).

E J Steele
15 July 2007