

Rough Grassland

Benefits for other Wildlife in Creating the Forgotten Habitat

by Chris Sperring



One of the most fundamental forms of habitat management employed by the Trust in its efforts to help the Barn Owl's recovery is the establishment of corridors of rough grassland to link isolated populations. Here Chris Sperring, the Trust's Conservation Officer shows how the corridors and wider areas of such habitat established as a result of the Trust's initiative are proving beneficial to many other forms of wildlife too.

It still seems an alien idea to some within the conservation movement that we can create something from nothing. All too often, the pre-occupation is to save what is already good. This approach on its own can lead to wildlife reserves which become islands, surrounded in many cases by green or concrete deserts; even the very species which the reserve aims to protect becomes threatened by its isolation.

The idea of creating grassland corridors to link strongholds of a particular species was first put forward by Shawyer (198). This proposed the creation of corridors of rough grassland to link isolated communities of Barn Owls, but there is no reason at all why this basic idea should not be used for other habitats as well. Indeed this has occurred in the past (more through accident than design) through the planting of hedgerows and trees during the period of land enclosures. These traditional farming methods would have had a positive impact on various species of both plants and animals by linking wildlife communities, providing natural dispersal routes rich in food to assist colonisation (see also O'Connor & Shrubbs, 1986).

Background

This paper looks at rough grassland areas, both corridors and wider areas, that I have created in south-west England as a way of increasing the Barn Owl population within the region.

Rough Grassland

Rough Grassland is a habitat that has been allowed to grow largely unhindered for a period of time, allowing a tussocky grass sward and litter layer of dead stems to develop above the soil level. If left for too long without management, then invasion by scrub will occur, eventually leading to the establishment

of woodland. The speed at which this process takes place depends on many factors such as soil type, climate and the proximity of existing woodland or scrub.

The majority of the areas created in the south-west are not close to woodland or scrub so that invasion is less rapid. Even so, I advise a cut every third or fourth year, and where grassland occurs close to woodland, then every year or every other year. The number of rough grassland areas created in Avon currently number 22 individual sites, with 12 in Somerset. The total length of rough grassland corridors stands at about 50 miles, which does not include areas where the land owner has left whole fields. The types of person enlisted have ranged from individual farmers and estate owners to managers of industrial sites, the National Rivers Authority and water companies in the area. Of the sites mentioned above at the time of writing, 10 are now regularly occupied by Barn Owls in Avon, of which four are established as regular breeding sites, while in Somerset 12 are now occupied, 7 of these being new breeding sites.

Invertebrates

A full list of invertebrates attracted to these sites would require far more space than *The Raptor* can provide; indeed I have only skimmed the surface in cataloguing them.

The benefits for these animals become obvious when we consider that in grazed, or regularly mown grassland overwintering insects and their eggs normally remain dormant and thus become very vulnerable to frost. In rough grassland, however, insects and their eggs are better able to overwinter within the tussocks or on the taller grass stems, insulated from frost and protected from snow and rain. The advantage of high insect numbers to other groups of animals becomes obvious, for example where a rough grassland corridor has been

established along a drainage ditch or river; shrew and bat numbers increase considerably.

During the summer months at Portbury, where not only the rhines but also whole fields are allowed to grow, the number of insect-feeding birds on the rough fields compared to surrounding well managed farmland is very obvious. In 1992, during June and July, I compared the numbers of feeding Swifts (*Apus apus*), Swallows (*Hirundo rustica*) and House Martins (*Delichon urbica*) over the well managed fields with those over the rough grassland fields. This was done by visiting both areas at regular intervals for set periods. The two habitat types adjoin each other, and visibility was good over the whole area. Most of the Swifts and House Martins were nesting some 3 miles away, the Swallows in nearby farm buildings. A total of 30 hours was spent observing, and the total area investigated amounted to 50 acres. It quickly became apparent that the well managed fields were much less used, particularly by Swifts and House Martins. The results were very conclusive; of their total hunting time, these aerial feeders spent 82% over rough grassland, and only 18% over well managed fields.

Dragonflies and Damselflies are also noticeably increasing within the rough grassland plots, even where the grassland corridors are situated well away from water. Their presence, as with Swifts and hirundines also benefits greatly from an increase in the population of smaller insects. Other obvious benefits have been for grasshoppers and bush-cricket. Lesser Marsh Grasshopper (*Chortippus albomarginatus*) and Short-winged Cone-head (*Conocephalus dorsalis*) being two examples that have benefited from environment. Indeed the whole area of rough grassland is now alive with the sound of bush-cricket by night and grasshoppers by day. On the adjoining well-managed areas the silence tells a different story. Major increases in butterflies and moths have also occurred within the grasslands created, making this a much more attractive place.

Small Mammals

The obvious benefits for the Short-tailed Vole (*Microtus agrestis*) are evident from the evidence of activity in the rough grassland compared with the total lack of vole signs in the well-managed grasslands. The Bank Vole (*Clethrionomys glareolus*) is more restricted to hedgerows with one exception, a wide rough grassland corridor created on farmland at Chew Valley in Avon. Here, a high number of Bank Voles were present 15 metres from the nearest hedgerow; it was noted that Short-tailed Vole activity on the other hand was low here. Wood Mouse (*Apodemus sylvaticus*) activity at the Portbury site is

also very high, with much evidence of foraging and breeding in the rough grassland areas. This is important because these small mammals form an important secondary prey item for most of the mammal hunting raptors. This differs in the Somerset levels where the Common Shrew (*Sorex araneus*) is the main alternative prey. This species is much in evidence in rough grassland, but the main beneficiary from the increase of this habitat has been the Water Shrew (*Neomys fodiens*). This has been particularly evident on newly created rough grassland corridors in North Avon. Some of the Water Shrews there were found well away from any water source, where breeding was much in evidence. Since this discovery, other newly created sites were also checked for evidence of Water Shrews. At all of them it was found that this hitherto unrecorded species was now present, as confirmed either by direct observation or from remains found in raptor pellets.

Full details of the bat species using these newly created areas awaits field work by the local Bat Group. However, the Noctule (*Nyctalus noctula*) is certainly seen more often and interestingly, where the rough grassland forms a corridor, these bats hug the corridor as they hunt. Other species of bats would also be expected to benefit from the enrichment of insect life in these areas, and a further report will be produced in due course as more information becomes available.

Birds

Species which have been recorded for the first time or have become more numerous in these areas since rough grassland was established are as follows:

- Grey Heron (*Ardea cinerea*) - feeding on voles.
- Shelduck (*Tadorna tadorna*) - chooses rough grassland for cover and breeding.
- Buzzard (*Buteo buteo*) - attracted by vole increases.
- Hen Harrier (*Circus cyaneus*) - more frequently sighted in winter.
- Sparrowhawk (*Accipiter nisus*) - more often seen hunting.
- Kestrel (*Falco tinnunculus*) - very noticeable increase.
- Merlin (*F. columbarius*) - observed in areas where previously unrecorded.
- Hobby (*F. subbuteo*) - as Merlin, doubtless due to increase in insects.
- Peregrine (*F. peregrinus*) - increased usage of these areas.
- Pheasant (*Phasianus colchicus*) - feeding, breeding and use of rough grassland as cover.
- Quail (*Coturnix coturnix*) - in one corridor near Bath.
- Red-legged Partridge (*Alectoris rufa*) - large increase in breeding numbers.
- Grey Partridge (*Perdix perdix*) - large increase in breeding numbers.
- Water Rail (*Rallus aquaticus*) - using rough grassland as cover at edges of rhines.
- Lapwing (*Vanellus vanellus*) - feeding, and use of corridors as cover for young.

Jack Snipe (*Lymnocyptes minimus*) - increased use for cover and feeding.
 Common Snipe (*Gallinago gallinago*) - marked increase in use for cover and feeding.
 Woodcock (*Scolopax rusticola*) - very noticeable increase in 1992 and 1993.
 Redshank (*Tringa totanus*) - increased usage for cover, breeding and feeding.
 Curlew (*Numenius arquata*) - use for feeding and cover.
 Whimbrel (*N. phaeopus*) - use for feeding and cover on passage only.
 Barn Owl (*Tyto alba*) - rapid uptake when close to an existing population.
 Long-eared Owl (*Asio otus*) - now breeding for the first time.
 Short-eared Owl (*A. flammeus*) - increase in sightings, winter only.
 Nightjar (*Caprimulgus europaeus*) - increased use for breeding.
 Swift - see notes in invertebrate section.
 Kingfisher (*Alcedo atthis*) - has become established along drainage ditches flanked by rough grassland corridors.
 Skylark (*Alauda arvensis*) - noticeable increase in singing individuals.
 Swallow - see notes in invertebrate section.
 House Martin - see notes in invertebrate section.
 Meadow Pipit (*Anthus pratensis*) - increased, and breeding in new areas.
 Whinchat (*Saxicola rubetra*) - increased, and breeding in new areas.
 Stonechat (*S. torquata*) - increase in winter numbers.
 Grasshopper Warbler (*Locustella luscinioides*) - noticeable increase.
 Sedge Warbler (*Acrocephalus schoenobaenus*) - noticeable increase.
 Lesser Whitethroat (*Sylvia curruca*) - noticeable increase.
 Whitethroat (*S. communis*) - noticeable increase.

There are many other species of birds which could also benefit; perhaps even the Corncrake (*Crex crex*) might one day return.

Reptiles

The Slow-worm (*Anguis fragilis*) is often encountered while looking for vole evidence in the dense mat of grass at ground level. This reptile feeds on spiders, earthworms and slugs, and the rough grassland also provides it with excellent cover. The Grass Snake (*Natrix natrix*) also makes good use of rough grassland, and is often found basking in the sun in these areas. Grass Snakes feed on a variety of prey from voles and frogs to birds' eggs and insects. The Adder (*Vipera berus*) is also found basking on the edge of the area in early spring, but is scarcely seen during summer; perhaps it is simply more wary than the Grass Snake.

Amphibians

Rough grassland provides much better cover for young Common Frogs (*Rana temporaria*) newly emerging from water than is the case for ponds in other surroundings. When checking for evidence of voles I often stumble across frogs, large and small, and often at considerable distances from water.

Conclusion

We started off creating an environment in which the Short-tailed Vole could prosper, and the Barn Owl would therefore thrive. This has without doubt been very successful. In the words of Shawyer (1987) the Barn Owl is a flagship, encouraging landowners to create a new environment. This overview has drawn attention to the many other species that have also had their survival prospects enhanced as a result of the Trust's habitat creation programme under the banner of its Farmland, Riverside and Forestry Link initiative.



