

Welcome

Dr David Baines, Director of Upland Research

Welcome to our sixth newsletter. Our spring counts of red grouse continue to show increased densities, despite many moors managing to achieve high and even record bags in 2014. Increases appear to be fuelled by depression of worm parasites with medicated grit. We urge strong caution against the ever-increasing dependency on medicated grit. Over-use will inevitably lead to worms becoming resistant to the worming drug, so please use only when worm egg counts suggest it is necessary. By doing so, medication will not be required annually, but perhaps as little as one in three years. We can do these tests for you and we'll say much more about it in our *Grouse Seminar at Ripley Castle this November*. Please come along, when we'll also describe in greater detail how heather burning affects grouse numbers and our attempts to restore grouse in Wales. **Finally, it would help us enormously, especially on printing and postage costs, if we could email you with future copies. That way, you can forward it to whoever you like too. Please reply now and send your email address to Julia (jhopkins@gwct.org.uk) so that we can do this next time. Thanks.**

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Spring red grouse counts

This winter was mild, presented few problems to grouse and allowed us to start and end our spring counts on time. Considering all 46 grouse counts together, the average density has again increased, now to 120 birds per km² from a previous record of 114 in 2014. Increases have been greatest in the South Dales and Bowland Fells, where densities climb toward those in the Yorkshire and Durham Dales, which have remained similar to last year. Continued high densities are causing further concern over bulgy eye infection from *Cryptosporidium baileyi*. Shooting sufficient to maintain a healthy stock has become a problem for more estates.

Mean grouse densities (birds per km²) in spring for five regions in 2014 and 2015.

	N	2014	2015	Change
Durham Dales	17	127	125	-2%
Yorkshire Dales	13	105	103	-2%
North York Moors	5	114	112	-2%
South Dales + Peak	7	104	139	+ 34%
Bowland Fells	4	73	85	+ 16%



What No Cotton Grass!

We think there's less cotton grass flowers this spring. The flowers, which occur from February to April, provide key food for both red and black grouse, as well as sheep. Over-grazing generally reduces their abundance, but we have seen fewer flowers in areas with little or no sheep grazing. Do you agree or have any comments?

Dave Newborn

Cryptosporidiosis in red grouse – radio telemetry study

In November 2013 we started a radio-telemetry study in the North Pennines to determine whether cryptosporidium infection impacted upon red grouse survival rates and breeding success. We established that the cryptosporidia infection significantly reduced grouse survival, particularly over-winter and in surviving grouse, subsequent breeding success is reduced through failing to breed or poor chick survival.

We are currently in the second year of the trial and in order to supplement the findings of 2013/14 have extended the trial to a second moor and increased the number of infected grouse we are monitoring. This autumn/winter we caught and radio-tagged and radio-tagged a further 78 infected grouse and 44 apparently healthy birds and thereafter tracked them weekly.

As last year, survival of infected birds has been poor compared to uninfected birds, with 47 bulgy eye birds found dead compared to 13 control birds. . We will monitor nests and then broods as they hatch to further consider timing and causes of poor chick survival in broods with infected adults.. We believe Cryptosporidia may be associated with high grouse densities on many estates, who may need to reconsider their harvesting strategy to reduce over-winter stocks.

Michael Richardson

Best Practice Burning Group R.I.P.

Since 2002 Dave Newborn has represented GWCT on the Natural England led Best Practice Burning Group. This group with 30 members from 18 organisations has progressed several burning issues including a review of the Heather and Grass Burning Code, organising training and best practice workshops and demonstration field visits. After some 40 meetings, it will phoenix into **The Upland Management Group** and will cover issues broader than burning alone, perhaps as diverse as predation, disease and wider habitat. Further “experts” may be added to the group as required. The new group will be chaired by Simon Thorp (Heather Trust) and will work closely with the Upland Stakeholders Forum and the new Upland Alliance.

Examining the effect of heather burning on red grouse



There is an increasing concern that heather burning, particularly on peatland sites, can have detrimental effects on terrestrial and freshwater ecosystems. We examined the effect of burning on heather height structure and red grouse populations on deep peat (blanket bog) and shallow peat (heath) moors. Grouse density in spring and summer as well as breeding success was recorded on 36 moors in four regions of northern England (Bowland Fells, North Pennines, South Pennines and North York

Moors). Within each grouse count area, habitat data (variation in heather height (cm) and proportion of sample points with evidence of burning (fire frequency)) were collected in 1997 and 2010. We examined how fire frequency affected variation in heather height, as well as grouse density and breeding success, and compared the effect of fire frequency on blanket bog and heath moors. Variation in heather height was found to be positively related to fire frequency on moors. Although there was no evidence that fire frequency influenced spring grouse density, moors which were burned more frequently tended to have higher breeding success and greater grouse densities in summer than those which were burned less often. Our results provide evidence that burning can benefit grouse by creating a more variable vegetation structure, and that the effect of burning is similar on moors of differing peat depth. We intend that these results will contribute to the development of burning best practice that will minimise environmental impacts on peatland sites whilst improving habitat for moorland birds, including red grouse.

Gail Robertson

Black Grouse Update

Numbers increasing

To-date we have completed the April counts of males attending leks in northern England (May still to come). In Teesdale and Weardale, we have counted males annually at 34 leks since 1989. This spring, numbers are the highest ever, with 391 males counted, a 14% increase on last year. Numbers have now increased three-fold since the severe winter of 2009/10 when just 109 males were recorded in spring 2010. In the Yorkshire Dales numbers are also up 7% on last year with some further range expansion recorded, with new records of lekking males in formerly occupied areas in Wharfedale.

Nidderdale translocation project

In autumn 2014, funded by Yorkshire Water, the Nidderdale AONB Partnership, Friends of the Nidderdale AONB, two private landowners and the Ernest Kleinwort Charitable Trust we released a further nine males and 20 females at the release site in Nidderdale in the Yorkshire Dales. All birds were radio-tagged. Initial results are promising, with eight males staying within 2km of the release area (one missing), 13 females within 1-km of the release site, three within 4km and one 8-km away. Two females we cannot locate and one is dead. We are tracking birds weekly to monitor lek establishment by the males and breeding productivity of the females.

Request for Black Grouse sightings in the Yorkshire Dales

Black grouse are expanding their range into formerly occupied areas in the Yorkshire Dales (South of the River Ure in Wensleydale). To help us to monitor range expansion and to plan future translocation work, information on sightings of black grouse in this area would be very useful.

Philip Warren: pwarren@gwct.org.uk



Langholm Update

The Langholm Moor Demonstration Project is a partnership between the Game & Wildlife Conservation Trust, Scottish Natural Heritage, Buccleuch Estates, RSPB and Natural England. The 10-year project aims to reconcile grouse moor and raptor conservation interests with the core objective of re-establishing Langholm Moor as a driven grouse moor while maintaining a viable population of hen harriers. Since its start in 2008, the Project has employed five keepers to manage the moor. In addition to predator control, heather management and the provision of medicated grit to control strongyle worms, all nesting hen harriers are provided with diversionary food.

In year eight, spring density of red grouse at Langholm has decreased by approx. 20% compared to spring 2014 (Fig.1), following average over-winter survival (54% of red grouse surviving from July to spring counts), which is an obvious drawback regarding the project target of achieving a sustainable surplus for driven shooting.

After a successful breeding season for hen harriers in 2014, the number of birds over-wintering on Langholm Moor has increased further compared to last winter (2013/14: 1.4 sightings per 100 scans during vantage point watches; 2014/15: 2.9 sightings per 100 scans). Apart from two satellite tagged females, which already over-wintered on Langholm Moor the previous winter, up to 10 different birds were seen at a known roost site, and now in early April several pairs have already settled into their prospective nesting areas.



As the vole numbers have remained high, the number of other generalist predators seen over winter has also increased compared to the previous year. Buzzards seen on vantage point watches over-winter increased from 10.4 sightings per 100 scans (2013/14) to 16.7 sightings per 100 scans (2014/15), and the number of foxes seen per hour lamping between July and December increased from 0.12 in 2013 to 0.30 in 2014, however, the number of foxes shot in the same period has also more than doubled from 43 in 2013 to 98 in 2014.

Sonja Ludwig

Moorland Restoration in Wales

Some 15 years after the end of the Welsh Grouse Project on Pale Moor, the Trust are delighted to be taking part in another practical moorland management project in Wales. In November 2014, Welsh Government announced that CLA Cymru and the Trust had been awarded £248 k towards a moorland restoration project spanning 10 sites; seven in the north and three in mid-Wales.



Fallen grouse butt

The legacy of our project at Pale Moor was that despite investing in two excellent grouse keepers to control predators, we couldn't produce a surplus of red grouse to shoot. Seemingly because sheep ticks, and the louping ill virus that they carry, caused high levels of chick mortality. **Problem 1;** good predator control by gamekeepers may not be enough. If ticks and disease are present, they too need to be managed. To do this, sheep treat with acaricides are needed to act as tick-mops, whereby ticks trying to obtain a blood meal from sheep are killed. This should be easy, but two decades on from the start of the project at Pale, where have the sheep gone?

Problem 2; farming systems have changed. Headage payments have been replaced by area payments and hardy, native livestock breeds have been replaced with modern, bigger hybrids. Previously over-grazed hills are now often under-grazed. Fewer sheep, shorter grazing periods and deliberate avoidance of some areas due to severe tick infestations, has brought about dominance of rank heather and bracken, accompanied with prolific birch, rowan and spruce regeneration. So much so, that internationally designated heath and bog on these Special Areas of Conservation (SAC) are in acute danger of becoming scrub and eventually forest. Surely an increase in heather burning and cutting is needed to help prevent this.

Problem 3; the statutory conservation body in Wales (Natural Resources Wales) tend to disfavour heather burning on peatland and arguably drier heath sites too. Combine this with under-grazing, and hundreds of thousands of pounds have to be spent on tree and scrub removal programmes simply to maintain open moorland landscapes. Heather cutting is preferred, but cuts are small, localised and perhaps insufficient to benefit once common, but now rare, moorland birds such as grouse, blackgame and waders.

Problem 4; declines in red grouse have led to the virtual extinction of the grouse keeper. As well as a lack of managed heather, this is also associated with plentiful crows and foxes, whilst ground-nesting birds, including the merlin, an SPA (Special Protection Area) feature bird, are rare and declining.

GWCT's priority tasks in the next six months are to document existing management, whether it be predators, heather burning or sheep ticks, quantify remaining grouse and other wildlife and to prepare and cost a recovery programme. We intend developing a multi-partner, multi-million pound bid for European funding. Such a bid, if successful, may provide a more realistic timeframe of up to six years to start longer-term moorland restoration and the re-integration of grouse, farming and wildlife. It will not be easy.

David Baines

Staff (new and current)



Gail Robertson

I started as a Senior Research Assistant at the Coach House in November 2014, having recently completed my PhD at the University of Glasgow. My position involves analysing data collected from grouse population surveys and other field studies, and producing GWCT reports and publications. During my PhD I studied foraging behaviour of seabirds on Coquet Island, Northumberland, and examined how variation in foraging behaviour influences reproductive success.

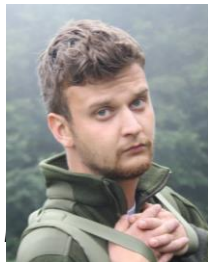


Lapwing update

Hi, I'm Hattie the current placement student here with the GWCT. I will be carrying on the good work of my predecessors, monitoring the lapwing population in the Upper dale. This spring, to-date I have found 60 lapwing nests. As well as the nest monitoring, I'll also be surveying curlew, red shank and lapwing. In previous years coloured leg rings have been put onto lapwing chicks to allow us to individually identify each bird and to see if they return in subsequent years to breed.

I would like to take this opportunity to thank all the farmers who very kindly let us use their fields to carry out the study.

Harriet Fuller (Cardiff University)



My name is Matteo Anderle and I'm an Italian student. I am here in England as an Erasmus student at the Game and Wildlife Conservation Trust, where I support Philip Warren in the Translocation of Black Grouse project. I come from Pergine Valsugana, a little city in the north-east of Italian Alps, close to Verona and Austria and am currently finishing my Masters course about wildlife management in the University of Florence. During my studies I did a bachelor stage on Black Grouse counting, and an internship on a Capercallie radio-trekking project in The Natural Park of Paneveggio. The title of my bachelor thesis is "*the Rock Ptarmigan in the Italian Alps*". I am fascinated by the behaviour of these birds and am really enjoying my time here at the Coach House.

Spring is in the air!

Congratulations to Fran Atterton (who worked with us on black grouse for almost six years) and her partner Barry on the birth of their baby girl. Larissa was born on 19 March. Also best wishes go to Richard Francksen (who is undertaking his PhD with us at Langholm) and his wife Emma, who are the proud parents of Owen born on 02 March.

OUR OFFICE ADDRESS:

GWCT, The Coach House, Eggleston Hall,
Barnard Castle, County Durham, DL12 0AG
Tel: **01833 651936**
E-mail: uplands@gwct.org.uk

CONTACTS:

Dr David Baines, Director of Upland Research
Dr Philip Warren, Research Scientist
Dr Gail Robertson, Senior Scientist
Dr Sonja Ludwig, Senior Scientist, Langholm
Michael Richardson, Research Assistant
Julia Hopkins, Office Manager
Helen Allinson, Research Assistant
Hattie Fuller, 2014/2015 student placement
Emily Trevail, 2014/2015 student placement, Langholm
Matteo Anderle, short term Erasmus placement

David Newborn, Senior Scientist
Swale Farmhouse, Satron, Gunnerside, Richmond, North
Yorkshire, DL11 6JW Tel: **01748 886502**

*when e-mailing use first initial and surname (all lower case) plus @gwct.org.uk

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Please advise us if you have changed any of your contact details. Our database is strictly confidential.
jhopkins@gwct.org.uk or phone 01833 651936

This edition includes a fifth page entitled "Medicated grit and disease update". This is an insert. If it is not included please e-mail and I will send you one.
jhopkins@gwct.org.uk or phone 01833 651936

NEWSFLASH!

We are planning our **10th** North of England Grouse Seminar which will be held on Tuesday, 17 November 2015. The venue is Ripley Castle near Harrogate. Ticket prices will be £45/each (the same as for 2012). More information to follow.