

## Restoration of wildflower meadows in Cumbria

Park Meadow is a 1.57 ha field on a gentle west facing hillside in Cumbria. The meadow has an idyllic location close to Oxenholme Station and is visible both from the main west coast railway line and south Kendal. In 2013 Martin, Margaret and Nicola Evans bought the field, and set about finding out what was living in the meadow. Their survey found over 50 different grasses and herbs including several key ancient meadow indicator species such as pignut, great burnet, common knapweed, meadow vetchling, meadowsweet, lady's-mantle, common spotted and northern marsh orchid. There were also over 70 flowering spikes of common twayblade! Other plants included cuckooflower, red

clover, yarrow, cat's-ear, greater and common bird's-foot-trefoil, bulbous and meadow buttercup, common sorrel, germander speedwell, tufted and bush vetch, tormentil, harebell and field woodrush.

Not all of the meadow was as diverse. Part of the upper section of the field has been disturbed from the laying of two water mains and this has resulted in a much more grass dominated sward. Soil analyses by DEFRA showed the soil to be acid with a pH of around 5.9 and low levels of phosphates and potassium. In other words, it had not been significantly agriculturally improved and should be well suited for biodiversity



Park Meadow © Nicola Evans



enhancement. Margaret explains why they took on this challenge: “As life-long wildlife enthusiasts and conservationists, we were only too well aware of the tremendous loss of species-rich grassland since WW2, but we had never before had the opportunity to conserve and enhance some ourselves. We wanted to try and lead by example. Over the last few years we had managed parts of our large garden lawn as hay meadow with spectacular results. We started by sowing yellow rattle seed collected from a local meadow and this reduced the vigour of the grasses very successfully. We then plug planted with appropriate herbs such as great burnet, wood and meadow crane's-bill, oxeye daisy, common knapweed and melancholy thistle. Butterflies such as orange tipped, small tortoiseshell and peacock followed. This inspired us to expand the success of our lawn meadow when the opportunity to purchase the adjoining field arose. Lots of our friends are now asking for yellow rattle seed!”

In 2013, the year that Martin, Margaret and Nicola completed the purchase of Park Meadow, they left it to flower and set seed. In early September they gradually strip grazed it using their own registered rare breed Fell ponies. That autumn they scattered seed collected from local roadside verges including species such as yellow rattle, common knapweed and great burnet. They also plug planted a few species such as sneezewort, oxeye daisy, wood crane's-bill and melancholy thistle. The meadow was then lightly grazed intermittently over the winter, before being shut-up at the end of April 2014 to allow the wild flowers and grasses to bloom and set seed. At the beginning of September a local contractor was employed and made around 250 small bales of hay from the whole field. More seed was scattered on the less diverse areas after the hay had been cut. Fell ponies were again let onto the meadow to aftermath graze and tread the seed into the soil. Martin and Margaret aim to continue with this management to slowly enhance the less diverse areas of the meadow.



Park Meadow open day © Nicola Evans



Common twayblade © Nicola Evans



Yellow rattle © Nicola Evans



Fell ponies © Nicola Evans





Hay cut © Nicola Evans



Plug plants ready to be transplanted © Nicola Evans



Baling hay © Stewart Williams



Transplanting plug plants © Nicola Evans



Fell ponies © Nicola Evans



Chain harrowing © Nicola Evans

Margaret explains how the meadow has changed so far: “The yellow rattle seed we have sown in the last two years has taken well and is already spreading. Most of the plug plants have grown too. It is still early days, but we are hopeful of seeing an increase in floristic diversity year by year as our restoration efforts continue. By using Fell ponies to graze the meadow we are helping to conserve a rare breed as well as a species-rich meadow.”

“We now own four fields around our house - a total 10.5 ha - of which two are managed as meadows and two as pastures. We’re not farmers - our only stock is native Fell ponies. Most of the grassland is moderately species-rich with several wet flushes adding diversity. We graze it all very lightly on rotation, allowing the plants to flower and set seed when possible. Invertebrates such as chimney sweeper moths and orange tip butterflies love it.” Says Margaret.





Margaret transplanting plug plants © Nicola Evans

Martin, Margaret and Nicola have a plan for the future of their land. Their second meadow, called Long Meadow (1.8 ha), which they purchased in 2014, was not as species-rich as Park Meadow but does have eyebright and great burnet at the lower end. In 2016, their initial efforts took a big step forward, thanks to the help of Cumbria Wildlife Trust's Heritage Lottery funded Meadow Life Project. Both meadows were shut up in early May, and cut and baled as hay in mid August. They were then heavily grazed by their Fell ponies before being harrowed. Two large dumpy bags of species-rich Cumbrian meadow seed, purchased and donated by the Trust's Meadow Life Project were then spread by hand. Finally, in late September, over 3000 plug plants of various species, again donated by the Meadow Life Project, were planted with the help of friends and volunteers.

Margaret told us about her hopes "Needless to say, we're very excited about how our meadows will look in years to come! And we've recently heard that our application to Natural England for Higher Tier Countryside Stewardship has finally been approved. This will help us enormously to continue managing our meadows and pastures in a way that will sustain our native grassland flora and fauna for future generations."