

***Cotula alpina* (Hook.f.) Hook.f. (Alpine Cotula) in North-west Yorkshire (v.c.65),
Mid-west Yorkshire (v.c.64) and North-east Yorkshire (v.c.62) new to Britain and
Europe**

Because I am relatively new to the job of joint BSBI Recorder for v.c.65 North-west Yorkshire, I organised a series of Field Meetings in 2009 throughout the vice county to help me get acquainted with the area. Because of the lack of botanists living in the vice county some of the Field Meetings were not well attended. The meeting on Sunday 28th June had one of the worst weather forecasts of the summer but I duly turned up at the meeting place on Potts Moor, part of Kirby Malzeard Moor, an isolated grouse moor on the border of v.c.64 and v.c.65 between Nidderdale and Masham, I could hardly see my hand in front of my face the mist was so thick and there was a constant drizzle. As I expected no one materialised but rather than waste a day I put the brolly up and kept to roadside verges and tracks for fear of getting lost.

At an altitude of almost 430mOD on the border between the two vice counties is a cattle grid, the vegetation on both sides of the road is a well grazed peaty gritty turf and dotted around was a small inconspicuous prostrate plant I recognised as a *Cotula*. I was not surprised because before I set out I checked through the records for the hectad and had noted *Cotula squalida* (Button Weed) found in 2004, naturally I assumed that was the record.

That evening, going through the day's records I realised that the 2004 record was about 5km away. *Cotula* not featuring prominently in any of my Floras I quickly got on to Google and started going through the *Cotula* species found in Britain, but no match, eventually I came across *Cotula alpina* (Alpine Cotula) from New South Wales, Australia, which looked identical. I hadn't collected a specimen so went back to Potts Moor and collected a plant to send off to Eric Clement. I also emailed the Australian National Herbarium to see if they could confirm the identification from my photographs. I had a reply from Brendan Lepschi, the Curator, who said it was very likely *Cotula alpina* (Hook.f.) Hook.f., but he would like a specimen to be certain. I have since collected and pressed this and am in touch with the Herbarium in The Royal Botanic Garden, Edinburgh who will hopefully be able to do an exchange to get it through Customs into Australia. In the meantime Eric replied telling me my identification was correct, it matched *Cotula alpina* (Hook.f.) Hook.f., apparently new to Britain and Europe. It is however, likely that some records of the sparsely hairy *Cotula squalida* – see Stace's New Flora of the British Isles, 2nd Ed., p.737 – should be re-determined as the totally glabrous, but otherwise very similar *Cotula alpina*. Both are typically less than 5cm tall.

In its native range *Cotula alpina* is confined to New South Wales, Victoria and Tasmania. In New South Wales it is found in the Snowy Mountains, alongside the road over Mount Kosciuszko, the highest point in Australia where the terrain and climate is much like parts of Yorkshire's moorlands.

I then produced a paper on my find and submitted it to the BSBI News, however about twenty minutes later I received an email from a botanical friend of mine telling me that Anna White in Dumfries, whilst on holiday in Wester Ross had found *Cotula alpina* along a roadside verge near Polbain (Anna White 2009). I immediately got in touch with Anna who informed me that Eric Clement had confirmed her record and was wondering about other *Cotula squalida* records in the same area, whether they might be *Cotula alpina* too.

With this in mind I thought I ought to check out the 2004 record for *Cotula squalida* on the same moor but about 5km away from my Potts Moor find. On the 11th September I set off approaching the moor from the eastern side via the hamlet of Ilton. About 30 metres through the gate onto open moorland, I came across *Cotula alpina*, lots of it, almost the dominant plant on both sides of the sandy moorland track, any open areas of Agrost-Festucetum grassland were now nearly pure *Cotula alpina*, and in places where the moorland had been burnt it was spreading on to the bare peat. In places it was growing alongside the little New Zealand alien *Epilobium brunnescens*, the Kiwi and the Aussie obviously at home on an English moor. I followed the track until I reached the grid reference for the 2004 record. It was obvious that this was the *Cotula* that had been seen and mistaken for *Cotula squalida*. I then turned back and went down a side track towards Grewelthorpe and found that the *Cotula alpina* was still present well into v.c.64. I then decided to go back and approach the moor from the western side just below my original record and sure enough about 1km in from the road I came across more *Cotula alpina*. As darkness was falling I headed home but came back to this point on 28th September and walked all the way across the moor to the site of the 2004 *Cotula squalida* record, the *Cotula alpina* was present in the same quantity all the way. I investigated another path going down to Bouthwaite and this too had *Cotula alpina* well into v.c.64.

I reported these finds to the v.c.64 recorder Phyl Abbot who informed me that she had found a small *Cotula* in 1995 on a track just to the south near Dallow Moor, it had keyed out in Stace to *Cotula squalida*. I suggested we meet and check it out but due to getting held up in traffic we missed each other and decided that rather than waste the day my colleague and I would check out all the other tracks on the moor. Phyl's *Cotula* record turned out to be *Cotula alpina*. It had covered about 5 metres of trackside in 1995 but now covered the roadsides to the northern and southern boundaries of the moorland, the longest distance being 2.5 km. This meant it was spreading at a rate of at least 0.18 km per year. We then went up the track from Grewelthorpe and recorded the extent of the *Cotula* there and on the track from the Dallowgill road. This had *Cotula alpina* from the cattle grid near Malaby House all the way to Stopes Bridge and beyond. We then drove round to Bouthwaite at the eastern end of the same track and found the *Cotula* went all the way over the moor.

Phyl Abbot emailed me again a few days later to say she had spotted a record of *Cotula squalida* on Rudland Rigg on the North York Moors on the Ryedale Naturalists website with a photograph of *Cotula alpina*. On 23rd October I visited Rudland Rigg

to see if this plant was *Cotula alpina* and how much ground it covered. I approached from the southern end and came across it almost at the top of the ridge, at first only intermittently in the short Agrost-Festucetum turf on the tracksides but after 50 metres it became more frequent but not quite so dominant as on Kirkby Malzeard Moor where it was also growing in the drainage channels alongside the track, the Australian literature mentions that it grows in boggy areas too. It was present along the track sides for 2 km then gradually disappeared. It will be interesting to see if it spreads further along the track in the future.

I sent Vince Jones a copy of this paper and the records I collected on my visit to Rudland Rigg, he replied telling me he had seen the same plant on Egton High Moor, south of Glaisdale, nearly 2 km on the well defined footpath and 4x4 track across the moor. There were also a few patches where the above track merges into Smith's Lane near Wintergill Plantation.

In v.c.64 and v.c.65 *Cotula alpina* occurs in 3 hectads, SE16, SE17 and SE27 and within these was present in 19 tetrads, in v.c.62 it occurs in hectads SE29 and NZ70 and was present in 2 tetrads in each of these, in total it covers a distance of approximately 20.5 km but there may be more around, there are other tracks on the moors which were not investigated.

Obviously this small plant has been around for some time and probably came in with wool shoddy (waste) which was used as a manure on lowland brassica and rhubarb crops (pers. comm. D. Shimwell) and market gardens (Dony, 1958). How it found its way from there to the open moorland is likely to remain a mystery but it obviously relishes the well grazed, sandy, peaty track/road side habitat. It is possible that seed is being spread from moor to moor on the wheels of 4x4 vehicles used by the off-roading fraternity, all the moorland tracks are bye-ways open to all traffic (BOATS) or Bridleways. If anyone has spotted this small plant elsewhere I would appreciate it if they would let me know.

I would like to thank Eric Clement for all the research he did to identify this plant and help with this paper, also Brendan Lepschi from the Australian National Herbarium who sent botanical information regarding *Cotula alpina*, Phyl Abbott and Vince Jones for their assistance and records, and Rod Corner, Dr. Margaret Bradshaw, David Shimwell, Rita Mark and Beryl Armstrong for their help.

References

Costin, A., Gray, M., Totterdell, C. & Wimbush, D. 2000. Kosciuszko Alpine Flora. (2nd Ed), CSIRO

Dony, J.G. 1952. Wool Aliens in Bedfordshire. BSBI Conference Report 1952, 160-163.

Thompson, I.R. 2007. A taxonomic treatment of the tribe Anthemidaea (Asteraceae) in Australia. *Muelleria*, **25**, 21-58.

White, A. 2009. First known Record of *Cotula alpina* in Scotland. (In press)

Wilmore, G.T.D. 2000. Alien Plants of Yorkshire. Yorkshire Naturalists Union.

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