



The Conservation of Field Gentian

Report to Alice McCosh trust

Summary

In 2018 The Alice McCosh trust contributed a sum of £1000 towards our project examining the status the Field Gentian in the New Forest and Pembrokeshire Coast National Parks.

The project has allowed us to collect detailed ecological information from both areas, as well as an updated picture of how the populations fluctuate from year to year.

Below is an outline of the Pembrokeshire surveys, giving detail from each site, pending a full ecological analysis and further report to be produced this winter.

The New Forest project received a massive setback, when the heatwave of the summer of 2018 killed off every single population, an event never seen in living memory. One of the larger populations did then produce a small handful of plants at the end of September, and we are monitoring these closely to see whether they are able to set seed in the remaining days of Autumn.

The heatwave had similar effects on several of the Pembrokeshire populations, although a handful of sites were not badly affected.

The funding of this project has allowed detailed monitoring of these sites to take place, and as tragic as the impacts of the heatwave are, without this funding we may have completely missed this localised extinction event. What this catastrophic event now allows us is a chance to monitor the recovery of these sites, and ascertain what survival mechanisms, such as seed banks and enforced dormancy, the plants possess.

We are hugely grateful to the trustees of the Alice McCosh Trust for contributing to this project and increasing our understanding and ability to save this endangered and iconic plant.



***Gentianella campestris* (L.) Boerner in Pembrokeshire**

This report summarises progress in monitoring populations of *Gentianella campestris* on Castlemartin Ranges in Pembrokeshire. It is the third year of a three-year project designed to improve knowledge of population fluctuations in this rare annual plant and its relationships to vegetation condition. A final report will analyse the results in relation to environmental factors and management at this site.

Seven populations, five of which were originally surveyed by Stephen and Anne Coker in 2004 and two (Furzenip and Saddle Point) by Bob Haycock in 2007, were located and surveyed in 2016. The locations of populations of *Gentianella campestris* as determined by GPS were revisited on 15th and 16th August 2017 and 20th-22nd August 2018. Numbers of plants were recorded and the condition of the vegetation was assessed. Additional quadrats were recorded to supplement those recorded in 2016. Comparison of numbers of plants recorded by detailed searching in quadrats with numbers recorded by more superficial searching suggested that actual totals might be approximately five times greater than the numbers counted. This is due to the very small size of many plants and their reluctance to flower in cloudy conditions.

Of the populations surveyed, numbers of *Gentianella campestris* plants were higher in 2017 than in 2016 at Furzenip, St Govan's Head and St Govan's Chapel to Buckspool Head, similar at Flimston Down and further reduced from the already low level at Linney Head (Table1). Numbers of plants were very low in 2018, with a good population only recorded at Mewsford Point. It is likely that these low numbers were a result of the extremely dry and hot weather during the summer.

At all sites other than Linney Head, vegetation was well-grazed, species-rich H7b heathland and considered to be in ideal condition for *Gentianella campestris* in all years, although showing the effects of the severe drought in summer 2018.