Management of Conservation Verges on the island of Anglesey

Jane Rees and Hilary Kehoe

North Wales Wildlife Trust

First botanical survey

- when: 1978 -1979
- where: old county of Gwynedd
- who: team of surveyors employed under the Job creation programme
- why: to identify areas of conservation interest, based on floral diversity, within the road network

Survey outcome:

- 697 species were recorded (66% of the Gwynedd county flora)
- 598 were native to the area - The verges were the main habitat for many species
- The verges surveyed were classified:

- Very High Conservation Value,

-High Conservation Value

-Moderate Conservation Value

- a list of VHV and HV verges was drawn up for the Highways Dept.- to be consulted when road improvements were proposed.

Using the results of the Prosser and Wallace survey and local knowledge a “Schedule of Roadside verges of Nature Conservation Importance” was prepared for Anglesey

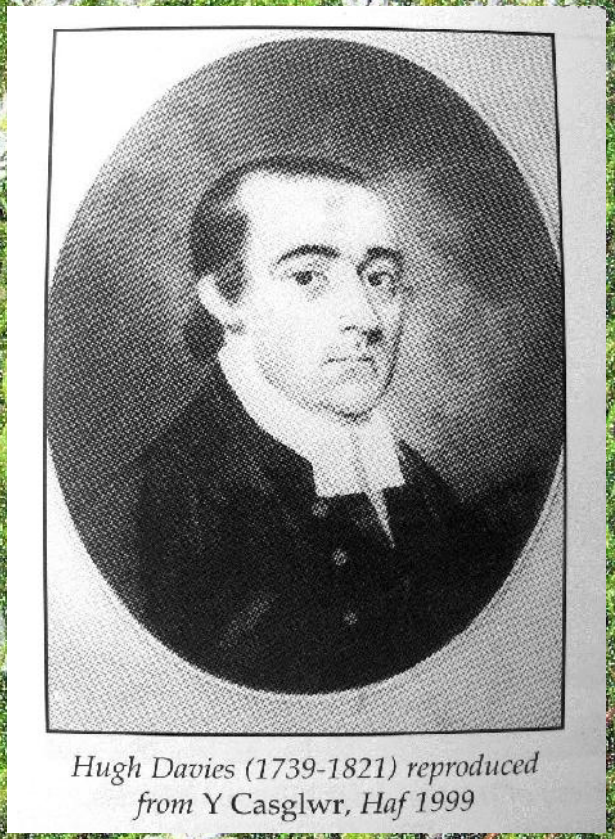
12 verges were selected for special treatment to maintain their value

- Limited cutting in the summer
- Strimming, raking and removal of arisings in the autumn
- This extra work was NOT financed from the Highways budget!

The Local Biodiversity action Plan (LBAP) and the AONB management plan recognise the value of verges as an attractive feature of the local environment.

Many verges are fragments of a vanished landscape

In one location a plant, Spotted Medick, is still present 200 years after it was recorded by the Rev. Hugh Davies in his local Flora “Welsh Botanology” (1813)



Hugh Davies (1739-1821) reproduced from Y Casglwr, *Haf 1999*

Verges are a refuge for wild flowers rarely found on farmland such as field scabious, cowslips and harebells.

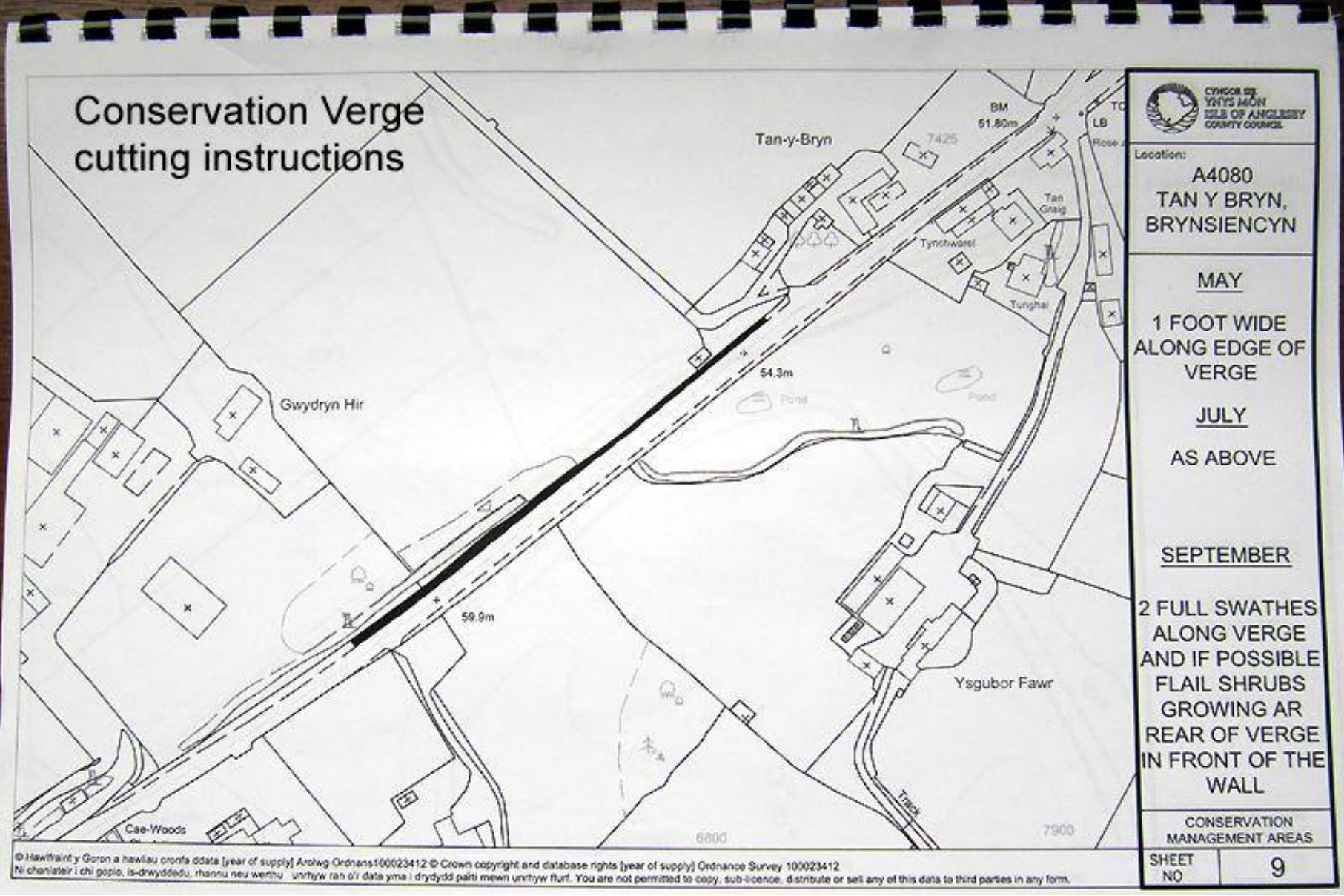
Of the 1700 species and varieties of plants recorded in Anglesey, 600 -700 species have been found on the island's verges.

Several national rarities including Greater Broomrape *(Orobanche rapum-genistae)* can be found.

◄ Greater Broomrape

Extent of the resource

- Approximately 1070 km of roads
- Less than 30km have a really rich and diverse flora
- The “best” verges border unimproved farmland
- Drift or seepage of fertiliser from intensively farmed land favours coarse grasses and agricultural weeds such as Nettles, Docks and Hogweed
- Most of the island’s habitats are represented – dune and heath, semi-natural grassland and ditches with Water voles, newts and frogs
- Lizards, Slow-worms, Glow worms, Bees and Butterflies can all be seen.



A schedule of the Conservation Management areas has been prepared for the contractors and Highways staff.

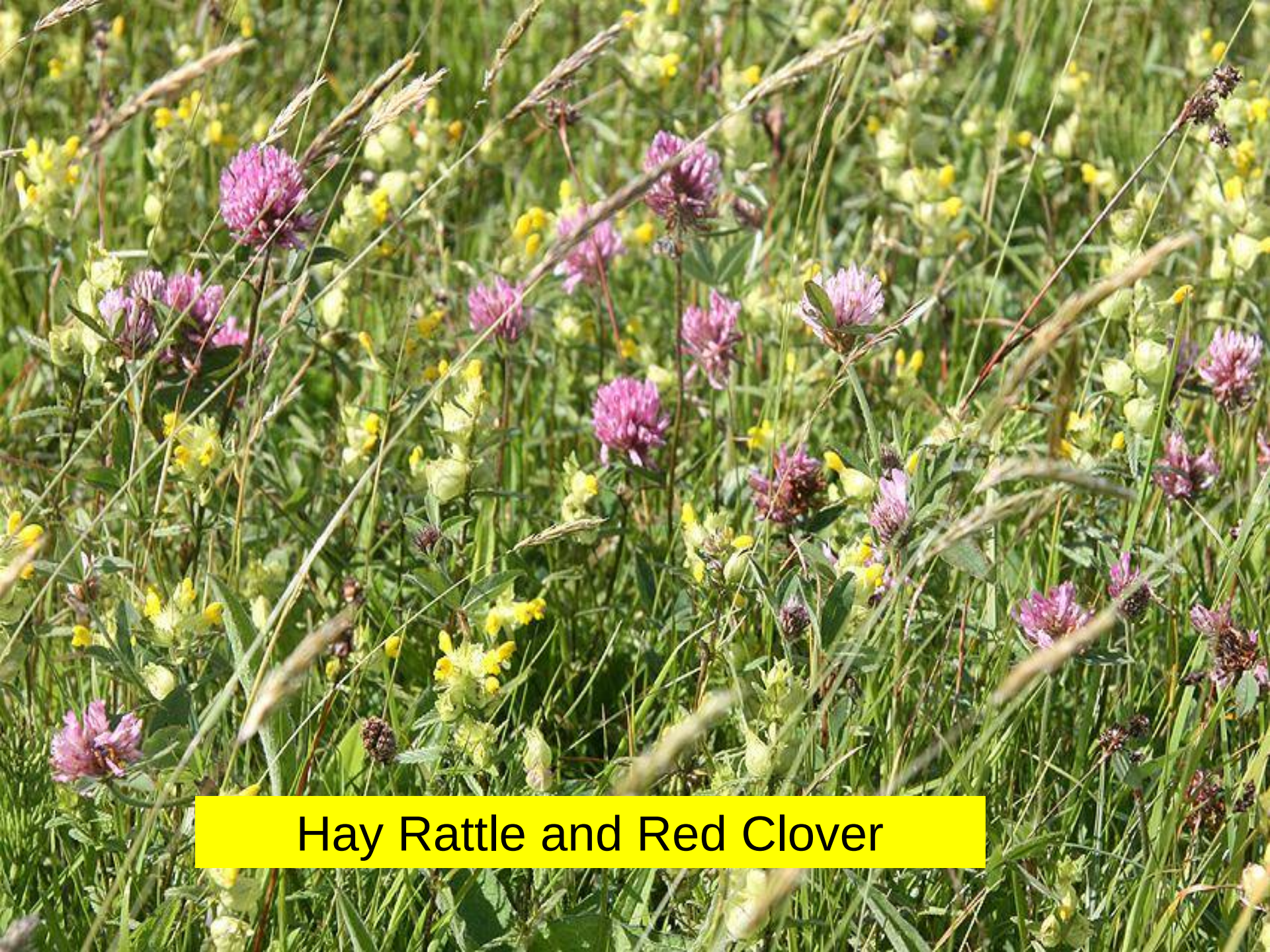
CMAs are marked on the road with a solid white triangle at either end

They are not cut until the end of summer

On most CMAs arisings are raked off and removed

Strimming and raking off arisings on a CMA

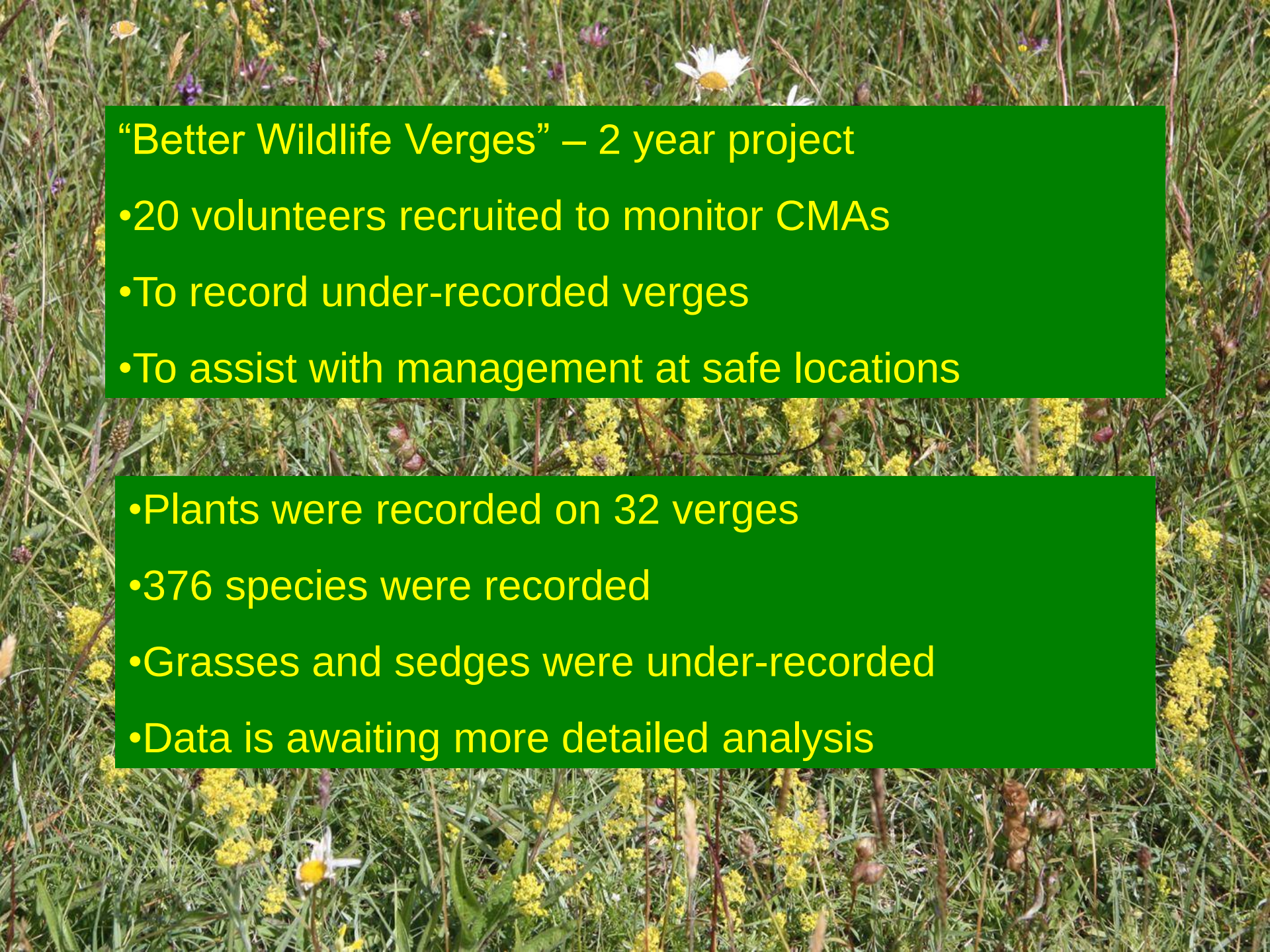
Vegetation is cut, baled and removed at the two largest sites


Hay Rattle and Red Clover


Common Spotted Orchid has become more abundant year on year


Clawdd banks are under threat


Verge Surveyor at work!



“Better Wildlife Verges” – 2 year project

- 20 volunteers recruited to monitor CMAs
- To record under-recorded verges
- To assist with management at safe locations

- Plants were recorded on 32 verges
- 376 species were recorded
- Grasses and sedges were under-recorded
- Data is awaiting more detailed analysis


What of the future?

Collecting local seed with the Rytec Flail Mower Collector

Spreading local green hay as a seed source

To sum up:

Knowledge

Partnership &

Communication

Will achieve better verge management

Thank you

Management of conservation verges on the island of Anglesey

Jane Rees

I am a long-standing member and volunteer with the North Wales Wildlife Trust. I have lived in Anglesey for more than 50 years. Hilary Kehoe runs the Anglesey Grazing Animals Partnership under the wing of the North Wales Wildlife Trust and also is involved in contract work for the management and re-creation of wildflower rich meadows.

Slide 2: Background

1978/79: Roadside verges in the old county of Gwynedd were surveyed by a team led by **Dr Mike Prosser** and **Dr Hilary Wallace** set up under the Job Creation programme run by the Manpower Services Commission. This survey aimed to classify road verges in Anglesey, Caernarfonshire and north Merioneth, based on their floral diversity, and to identify areas of conservation interest within the road network.

Slide 3: The surveyors recorded 697 species of which 598 were considered to be native to the area. They estimated that more than two thirds of the county flora could be found by the roadside and stated that **for many species the roadside had become the major habitat.**

Based on their results they categorised the verges according to what they perceived as their conservation value – Very High Value (VHV), High Value (HV), Moderate Value etc. and drew up a list of verges of conservation interest.

It was intended that this could be used by the Highways Authority so that High and Very High Value verges could be taken into account when road improvements and verge management was being planned.

(The Very High Value and High Value verges were re-surveyed in 1993 to ascertain what if any changes were discernible as a result of the management that they had received over the intervening 13 years. They found that **the total number of species recorded was little changed but the floral diversity of individual sites had declined.**

The VHV verges had deteriorated to match the HV verges in the earlier survey but the latter had more or less remained HV. There had been **a marked increase in the amount of bramble and scrub on the verges.)**

Slide 4: Because the sites were selected for survey by random sampling many of the more interesting and visually attractive, verges on Anglesey were missed. **Using the list that Prosser and Wallace produced**, together **with local knowledge** accumulated by staff of the Nature Conservancy and local naturalists, the North Wales Wildlife Trust drew up a **"Schedule of Roadside Verges of Nature Conservation Importance"** for Anglesey for the Gwynedd Highways Department and this was carried over to Anglesey County Council after Local Government re-organisation.

12 of the listed verges were selected for special treatment deemed necessary to maintain their interest – limited cutting in the summer (½ swathe cut along the edge) followed by strimming, raking and removal of arisings in the autumn.

This **extra work was not financed from the Highways budget** but was found from various sources: to start with from the Gwynedd Planning Department, then from Landfill Tax funds via Entrust and more recently from various EU funding streams which have now dried up.

Slide 5: Anglesey's Local Biodiversity Action Plan (LBAP) and the AONB Management Plan both recognise the value of road verges for their attractiveness in full bloom and also as refuges for wildflowers that have become less common on farmland in recent decades due to changes in farming practice.

Our verges, particularly beside the minor roads, are in many cases fragments of a vanished landscape – slivers cut off from the adjacent land at the time of the enclosures alongside roads that have been in existence for hundreds, perhaps thousands of years. **Prosser and Wallace** described the verge estate as **"comparatively undisturbed, natural and in many cases, ancient series of habitats".**

Slide 6: In at least one location a plant can still be found 200 years after it was first recorded: Spotted Medick *Medicago arabica*, was recorded beside the road at Lleiniog by the Rev. Hugh Davies in *Welsh Botanology,* published in 1813, and it can still be found today at the same location.

Slide 7: Our verges are a refuge for a number of species such as Greater Knapweed, Cowslips, Betony, Bladder Campion, Field Scabious, Harebells, Bloody Cranesbill, Common Rockrose, Marjoram, Wild Basil which have almost disappeared from local farmland.

Slide 8: Of the 1400 plant species so far recorded on Anglesey between 600 and 700 have been found on

the island's verges. National rarities are occasionally found such as the impressive Greater Broomrape (*Orobanche rapum-genistae*), a parasite on gorse, found on one of the lanes leading to Red Wharf Bay.

Slide 9: Of the 1070 km of roads on the island probably less than 30 km have a really rich and diverse flora. The "best" verges are found bordering unimproved farmland and on the limestone.
Where verges border intensively farmed land with a high input of fertiliser the drift or seepage of nutrients favours coarse grasses and agricultural weeds such as Nettles, Docks and Hogweed. This enrichment is supplemented by the deposit of oxides of nitrogen from vehicle exhaust fumes.
Most of the habitats on the island are represented on our verges: dune and heath, woodland edge, semi-natural grassland and ditches with Water Voles, newts, damselflies and frogspawn in the spring. Common Lizards, Slow-worms, Glow worms and a variety of butterfly species can all be seen on our verges.

Slide 10: As I said earlier we have developed a very good relationship with the Anglesey Highways Department and **I would like to thank Anglesey County Council Highways Department for the increasing level of co-operation and goodwill that we have received over the years.**

Before the most recent contract was put out to tender a **Schedule of Conservation Management Areas** was prepared in consultation with the North Wales Wildlife Trust. This specifies management for 19 CMAs. (These verges were not selected for their value for pollinators: they were selected mainly for their botanical diversity - any value for pollinators is purely coincidental!)
As far as is compatible with road safety **these are not cut until the end of the summer.**
A short Power Point presentation has been prepared to be shown to Highways staff so that they can be informed as to the reasons for the special management of the Conservation Areas.

Slide 11: The conservation verges are marked by white triangles painted on the roads at the beginning and end.

Slide 12: Most receive extra strimming, raking and removal of arisings in the autumn/winter.

Slide 13: When funds permit the two largest areas are mowed and the arisings are baled and removed.
If cut vegetation is allowed to lie on the verges where it decays and returns nutrients to the soil, the growth of more vigorous grasses and agricultural weeds is favoured at the expense of wildflowers which thrive in nutrient poor situations. Piles of cut vegetation can also smother and kill many species of flowering plants by depriving them of light.

This extra management on the 19 sites costs between £1500 and £2000 each year.

Under this regime the floral diversity of the CMAs has been maintained and even enhanced.

Slide 14: In 1994 Hay Rattle (*Rhinanthus minor*) was introduced to the sward of our two largest sites and this has proved a useful management tool. It is an annual hemi-parasite drawing nutrients from the roots of grasses which as a result grow less vigorously and competition with wild flowers is reduced. The overall volume of vegetation is reduced which makes mowing easier. **However if this was to be used more widely as a management tool the times of mowing would have to be adjusted to allow seed to be shed each summer**.

Slide 15: With the continuing regime of impoverishment by raking and removal of arisings Common spotted Orchid (*Dactylorhiza fuchsii*) has become more abundant year on year. (Wind-borne seeds)

With regard to the rest of the verges - until 2012 there was a three cut regime on roads beyond the 30mph limit.
The new contract specifies three cuts for the A & B roads with the first single swathe cut taking place at the end of May.
The minor and unclassified roads receive two cuts per year: the first in June and the second in the autumn. The autumn cut is a double swathe cut in September/October – cutting approximately 2 m. width and intended to cut back brambles and shrubs that might otherwise invade the verges to a greater extent than they already have! **In practice this second swathe cut is not as effective as would be ideal** probably because the machinery used is designed to cut grass not hedges.

Slide 16: This is contributing to the **loss** of one distinctive and valuable feature of Anglesey's roadsides particularly within the AONB – namely the **clawdd banks** with their attractive and distinctive flora. They are disappearing under a shroud of brambles, gorse and other "coarse" vegetation.

Slide 17: In the early days of our verge conservation efforts it was possible to use volunteers to carry out management tasks but that is not easy today because of health and safety considerations. However, with care, volunteers can help by monitoring the verge flora and by recording under-recorded verges.

Slide 18: Under our recent "Better Wildlife Verges" project, financed by Anglesey's Sustainable Development Fund, 20 volunteers were recruited to collect data from under-recorded verges and to assist with verge management in safe locations.

Over time some verges may be removed from the category of HCV and others may be added to the list as our knowledge increases. This has already happened: at least 2 verges have been removed because they were invaded by scrub and trees – Ash is a particularly invasive species!

Slide 19: What of the future? Removal of arisings is the key to increasing floral diversity and thus the provision of more resources for pollinators. Funding of this extra management is a major issue –particularly as arisings usually have to be removed from the site to be composted – cost of transport and disposal fees. Because of Health and Safety Issues the extra cutting and raking can only be carried out by volunteers on a limited number of sites.

Slide 20: Slide 21: We hope that in the future new road schemes will make use of local "green hay" as a seed source for the re-vegetation of new verges such as those that will be created in connection with the building of the next nuclear power station on the island.

Slide 22:
To sum up: Schemes such as these are dependent on the **enthusiasm and knowledge** of individuals, the **willing co-operation** of Highways staff and **good communications** between Highways and Contractors. A better autumn cut is essential and landowners should be encouraged to cut their roadside hedges and banks letting in light to wildflowers that would otherwise disappear overwhelmed by brambles and other scrub. The sort of micro-management that we have been using in Anglesey is not always achievable. The present situation in Anglesey is not perfect and it has been achieved by a gradual bottom up process rather than a top down process. Unfortunately a "one size fits all" approach is not possible as different counties have differing geology with differing roadside habitats each of which has an "ideal" time of year for cutting.

For many people walking or cycling along a country lane is their main contact with wildlife and the countryside. Their enjoyment is enhanced if there is a range of attractive wildflowers in the verges. Visitors to the island enjoy seeing flowers such as primroses, wild orchids, lady's smock, bluebells and red campion in our verges: plants that have disappeared from roadsides in their home areas. Thus attractive roadsides as well as playing a part in wildlife conservation, can also contribute to the local economy and to our general health and well-being.