

Marsh Fritillary Action Plan

Introduction and Vision Statement

The marsh fritillary (*Eurodryas aurinia*) is an attractive butterfly that is usually on the wing from mid May until mid June. The larvae live communally in a silk web on devil's-bit scabious and they can be easily identified in late summer. The larvae overwinter low down in the vegetation and emerge the following spring, before pupating in May.



Marsh fritillaries live in metapopulations, i.e. a group of local colonies connected by occasional dispersal, in which there can be local extinctions and colonisations on any individual site over time. Individual colonies are also prone to local crashes and recoveries due primarily to a small parasitic wasp. Similarly, adverse weather conditions will also have an impact.

As marsh fritillary metapopulations require a large amount of habitat to survive in the long term, habitat loss or fragmentation can have a significant impact on the butterfly's survival.

In Wales the butterfly's habitat is usually damp neutral/acidic grassland with the larval host plant, devil's-bit scabious. It has exacting habitat requirements. Wet grassland supporting marsh fritillary populations should ideally receive moderate cattle or pony grazing to maintain a mosaic of short and tussocky sward – the short sheltered spots provide warm microclimates to aid larval development. Sheep grazing is unsuitable, as they preferentially graze the larval food plant and produce a short homogenous sward.

The marsh fritillary has rapidly declined in the UK and it has become extinct over much of its original range. South-west Wales is now one of its strongholds. Most of Carmarthenshire's colonies are aggregated to the south-east of the county and follow the South Wales Coalfield belt, with scattered colonies elsewhere. The size of many colonies are unknown, and whilst many may be small, collectively they make a significant contribution to the national population. Many sites are suffering from inappropriate levels of grazing; in particular a lack of grazing which has allowed pastures to become rank with associated scrub encroachment. Unfortunately, parts of this area are already highly developed and are under continued pressure for more housing and employment, which is another threat to the species.

Caeau Mynydd Mawr SAC (made up of three SSSIs) near Cross Hands is designated for the marsh fritillary and the marshy grassland. A local project is entering into agreements with local landowners to undertake management to improve habitat for the butterfly.

Eight Carmarthenshire SSSIs are designated with marsh fritillaries as a feature; additionally, the WTSWW has a nature reserve at Rhos Cefn Bryn where the butterflies occur.

Our vision for this important species is to prevent further loss of suitable habitat for the butterfly within the metapopulation areas, and to enhance suboptimal habitat through appropriate management to ensure sustainability of the populations and encourage expansion of their range. In addition, this species could be promoted as an flagship species within Carmarthenshire to raise the profile of our rich biodiversity, its links with local people's historic and current land management, and the factors that are threatening our natural environment.

Action Plan Objectives

- MF1SP** To maintain and increase the population and range of the marsh fritillary butterfly in Carmarthenshire
- MF2DCM** To continue to survey and monitor the distribution and status of the marsh fritillary in Carmarthenshire
- MF3RA** To raise awareness of the importance of the marsh fritillary in Carmarthenshire and provide advice on habitat management
- MF4POL** To ensure that surveys are undertaken to inform the decision making/planning process of any application/project that has the potential to affect the marsh fritillary

CODE	TEXT	START/END DATE	Lead partner	Action goal	Key partners	Funding	Priority L,M,H	Report Jan–Dec 2010	Report Jan–Dec 2011
MF1SP1	Enter into management agreements with local landowners in Mynydd Mawr MF project area (SN575122)	2010	BC	x Management agreements entered into	CCW Land owners	✓		<ul style="list-style-type: none"> • Report produced, inc.: • Five owners of 54ha signed up to Mynydd Mawr agreements, and owners of 3 SSSIs (15ha) were entered into Section 15 agreements and/or managed by the Project Officer. • Works included 2347m of fencing, 5.5ha scrub clearance and the removal of 8.7ha of rank <i>Molinia</i> and rush. Details available. 	
MF1SP2	Undertake project for MF at Llyn Llech Owain CP – habitat management and vol project growing DBS (SN566150)	2010–2014	CCC (Llyn Llech Owain CP)	One project established 2.5ha	Volunteers	✓ HLF	H	<ul style="list-style-type: none"> • Action ongoing. • Annual monitoring of MF population to be undertaken at LLO. • Tree felling has allowed new areas to be managed for Marsh frit. • Habitat creation including growing from seed and planting <i>Succisa pratensis</i> food plant. • MF already recolonised one area in 2010 - 100+ MF • Volunteers involved. 	
MF2DCM1	Undertake habitat survey of marsh fritillary metapopulation area around Mynydd Mawr SAC (SN575122)	2009–2010	CCC	Survey undertaken and report produced	CCW BC Landowners Contractor	✓		Action complete. Survey undertaken in 2009 and report produced in August 2010.	
MF2DCM2	Produce and maintain a GIS layer of marsh fritillary records within Carmarthenshire	2010–2014	BC	GIS produced	WWBIC,			Well advanced	
MF2DCM3	Identify further habitat outside Mynydd Mawr area for potential survey	2010–2014	BC	List of sites to survey	WTSWW, CCW, CCC	✓		Well advanced – priority site project underway.	
MF2DCM4	Undertake public survey to request records for Devil's-bit scabious plant	2010–2011	CCC	1 survey organised	WTSWW BC NBGW			2011 action	
MF2DCM5	Establish a network of key sites for habitat management outside designated sites	2010–2014	CCW	Network established	WTSWW BC CCC Landowners			Potential project for 2011– CCW funded.	
MF2DCM6	Monitor site at MoD Pembrey where there are records for Marsh Fritillary (SN371050)	2010–2014	BC	Survey report	Defence Estates			Monitoring undertaken on 27th August – two webs found.	

MF2DCM7	Research methods to restore/introduce devil's bit scabious to potential MF habitat	2010–2014	NBGW	Monitoring report of DBS research plots at NBGW				Plugs been introduced to a potentially good site on the east of the NNR. Not been monitored over 2010.		
MF2DCM8	Monitor RAF range at Tywyn Burrows for MF population (SN359061)	2010–2014	BC	Monitoring report	Defence Estates CCW			Not started		
MF3RA1	Promote marsh fritillary as a flagship species for biodiversity in Carmarthenshire – annual press release	2010–2014	CCC	Annual press release	BC CCW			Not started – 2011 action		
MF4POL1	Ensure that marsh fritillaries and their habitat are fully considered in any planning proposal considered by development control and development plans written by forward planning.	2010–2014	CCC	100% of relevant applications	BC CCW			Applications with surveys/ or where surveys have been requested: 10 Commented on 13 applications in 2010 requesting mitigation/compensation/ consideration of MF habitats/connectivity. . No mechanism at moment to calculate area or whether mitigation carried out.		
MF4POL2	Seek to designate areas of non-designated MF habitat as SINC, prioritising sites within settlement limits and within CMM landscape survey survey.	2010–2014	CCC	cSINC map produced	BC CCW WWBIC			Not started		