

VP-A1 GREATER BUTTERFLY ORCHID *PLATANTHERA CHLORANTHA* SPECIES ACTION PLAN

1. Introduction

The species is not an UK Biodiversity Action Plan Priority species; nor is it listed as a Species of Conservation Concern; but in Wales generally, and in Monmouthshire in particular, the species is of conservation concern. The main reasons for selection of this species for a SAP was its declining status locally and it is representative of about 150 plant species or subspecies in Monmouthshire, which are all rare or declining. Although not a brightly coloured orchid, the greater butterfly orchid has most attractive sweet-smelling flowers. The flowers are in loose spikes, are greenish or yellowish-white and vanilla-scented. The scent becomes stronger at night, attracting visiting moths seeking the nectar. Each plant has a pair of broad, elliptical shiny leaves at the base and some smaller narrower leaves on the flowering stem.

Greater butterfly orchids occur in open woodlands, on road verges and banks and in grassland or in hay meadows across the county, they are more common in the south and east. The main requirements of this orchid are nutrient-poor soils away from dense shade. It will disappear if artificial fertilisers (or too much slurry) are applied to grassland sites. In Monmouthshire the species is declining especially at woodland sites where the vegetation cover becomes too dense, e.g. at Hardwick Wood, Chepstow; part of this site has become too overgrown with dense conifers. Dense ash saplings cover the rest of the site and no flowering spikes have been seen in this wood in recent years.

All orchids are protected through the Wildlife & Countryside Act and it is an offence to uproot any species.

2. Current status

In Britain and Ireland the greater butterfly orchid is concentrated in southern and central England, the Welsh borders, the west coast of Scotland and the Inner Hebrides. Scattered populations also occur through northern England and Ireland. This orchid may be locally abundant at a site but is generally scarce throughout its range.

In Monmouthshire, this orchid has been recorded at only 20 sites, ten of these being in woodland (or on wooded rides and wooded road verges) and ten being in grassland. At most sites fewer than 20 plants (often only one or two) have been recorded but there are five sites where the population is more robust. At Upper Maerdy Farm in the Usk valley up to 100 spikes have been seen; more than 50 spikes have been recorded in the past at Hardwick Wood, Chepstow and 30-40 at Barbadoes Hill Meadows, Tintern. The best site in terms of numbers are the meadows of the Gwent Wildlife reserve at Pentwyn Farm near Penallt, where in one field 226 spikes were counted in 2002 (the record number at this site -

T.Evans, pers. comm.) and hayfields at Maryland where over 200 spikes were found in 2003.

Since 1970, greater butterfly orchids have been found at only 22 sites in VC35 with 18 of these being within Monmouthshire. However, plants are apparently extinct at six of the 20 sites and are disappearing at others. At Common y Coed, plants were lost because of contamination by chemical sprays and at Grange Wood Magor; plants disappeared due to land use change. At several other sites no plants have been seen in recent years.

Some sites are safeguarded by their SSSI designation, namely Pentwyn Farm and Barbadoes Hill Meadows. At others, scrub and tree encroachment (as at Hardwick Wood) or lack of appropriate management are reducing the numbers of plants.

3. Associated habitats

The main habitats with which greater butterfly orchids are associated are broad-leaved woodland and scrub, and both calcareous and neutral species-rich grassland.

4. Associated Species

In agriculturally unimproved meadows, a wide range of other plants may occur alongside greater butterfly orchid, notably green-veined and spotted orchids. In open woodlands twayblade and early purple orchid are common associates.

5. Current factors affecting the species

Factors affecting or threatening the species in Monmouthshire include:

- 5.1. Planting of conifers on broad-leaved woodland sites causes dense shade falling leaves lead to acidification of soil, which results in the eradication of orchids and other plants.
- 5.2. Lack of management of woodlands (which need constant attention) to control dense scrub, which shade the plants. Dense scrub and tree growth needs to be thinned to create glades and other open areas. The cut material (brash) or chippings (if branches are chipped) must not be left over the site. This also applies to road verges which have floristic interest as chippings and brash will smother the plants and cause enrichment or leaching of tannins onto the soil.
- 5.3. Invasion of grasslands by scrub and bracken where management is not sufficient to prevent scrub and bracken encroachment.
- 5.4. Planting of trees on grassland sites allows bramble encroachment, which out competes the orchids.
- 5.5. Overgrazing by sheep, cattle or horses or grazing early in the year prevents the plants from flowering and setting seed.

- 5.6. Cutting of hay crop too early in the year prevents the orchids from flowering and setting seed.
- 5.7. Butterfly orchids, as others, thrive on nutrient-poor soils and the application of artificial fertilisers, slurry or excessive manure will encourage growth of grasses to the detriment of orchids and species diversity in general.

6. Current Action

- 6.1. Monitoring of some sites to assess the presence and number of flowering spikes is carried out in some years by the BSBI recorder and other volunteers. Annual monitoring would be ideal.
- 6.2. One site, Pentwyn Farm at Penallt, is an SSSI and has been purchased by the Gwent Wildlife Trust. Management of the hay meadow is sympathetic to the requirements of the greater butterfly orchid.
- 6.3. Barbadoes Hill Meadows, Tintern are now an SSSI and subject to a management agreement.
- 6.4. Hardwick Wood is owned by the FC and managed by the GWT; an annual programme of thinning and cutting is being instigated to safeguard the habitat for greater butterfly orchids. A balance between the number of standard, mature deciduous trees and open space is a fine one and difficult to achieve but coppicing the under storey of hazel has seemed to work. If the trees are too dense, the orchids rapidly decline; however if there is too much light getting through brambles and ivy take over for a time until thickets of saplings become dominant. Neither of these situations favours the orchids.
- 6.5. The site at Maryland is managed sympathetically by the owner with the help of Monmouthshire Meadow Group.

7. Action Plan objectives and proposed targets

7.1. UK objectives and targets

Not applicable as not a UK priority species or species of conservation concern.

7.2. Greater Gwent objectives and targets

No BAP has yet been prepared at the Greater Gwent level.

7.3 Monmouthshire objectives and proposed targets

- 1 Maintain and enhance populations of greater butterfly orchid in Monmouthshire.
- 2 Secure appropriate management at known sites of greater butterfly orchid.

- 3 Surveys to locate possible new sites and monitoring of status at known sites, preferably each year.
- 4 Management of sites where species occurred in the past in the hope of plants reappearing.
- 5 Better understand the ecology of greater butterfly orchid.

8. Proposed actions and key partners for greater butterfly orchid

Action	Key Partners		Timescale	Meets Targets
	Lead	Partners		
1. Policy and legislation				
1.1. Ensure Policies and Strategies do not adversely affect existing populations.	MCC FCW	CCW NAWAD	Ongoing	1
1.2. Seek to designate all sites as SSSIs, SINCs or LNRs.	CCW MCC	MCS GWT	Ongoing At least 2 by the end of 2005	1 2 3 4
2. Site safeguard and management				
2.1. Sites supporting greater butterfly orchids should be identified and advice provided to land managers on appropriate management.	CCW GWT MMG	MCC Coed Cymru FCW landowners	Ongoing Projects	2 3
2.2. Grant aid and incentive schemes such as WGS, Coed Cymru and Tir Gofal should be used to encourage owners to manage suitable habitats sensitively.	CCW FCW	MCC Coed Cymru NAWAD	Ongoing	1 2
2.3. Ensure greater butterfly orchid's requirements are fully considered during any woodland/forestry management scheme or Tir Gofal scheme, which may affect the species.	FCW CCW	Coed Cymru NAWAD	Ongoing	1 2
2.4. Ensure Greater butterfly orchids are fully considered when assessing any development, which may impact upon the species.	MCC	CCW, MCS, Dev Plans, Dev control	Ongoing	1 2
2.5. Ensure opportunities for appropriate mitigation during development are used when avoidance is not an option.	MCC	MCS, Dev Plans, Dev control	Ongoing	1 2

2.6 Ensure opportunities for enhancing habitat for greater butterfly orchid are used during the planning process.	MCC	MCS, Dev Plans, Dev Control	Ongoing	1 2 4
3. Species management and protection				
3.1. Investigate reasons for decline or loss.	GWT	MCS	5 sites by the end of 2005	5
4 Advisory				
4.1. Raise awareness of landowners and managers to the orchid's requirements in order to promote appropriate management.	CCW GWT MMG	MCC FCW Coed Cymru	Ongoing	2
5. Future research and monitoring				
5.1. Monitor status at each known site.	CCW GWT MMG	BSBI	Annually	3

9. Links to other Action Plans

The plan should be considered in conjunction with any future plans prepared for woodlands, road verges or banks and with the Species Rich Grassland and Floodplain Pastures Action Plan.

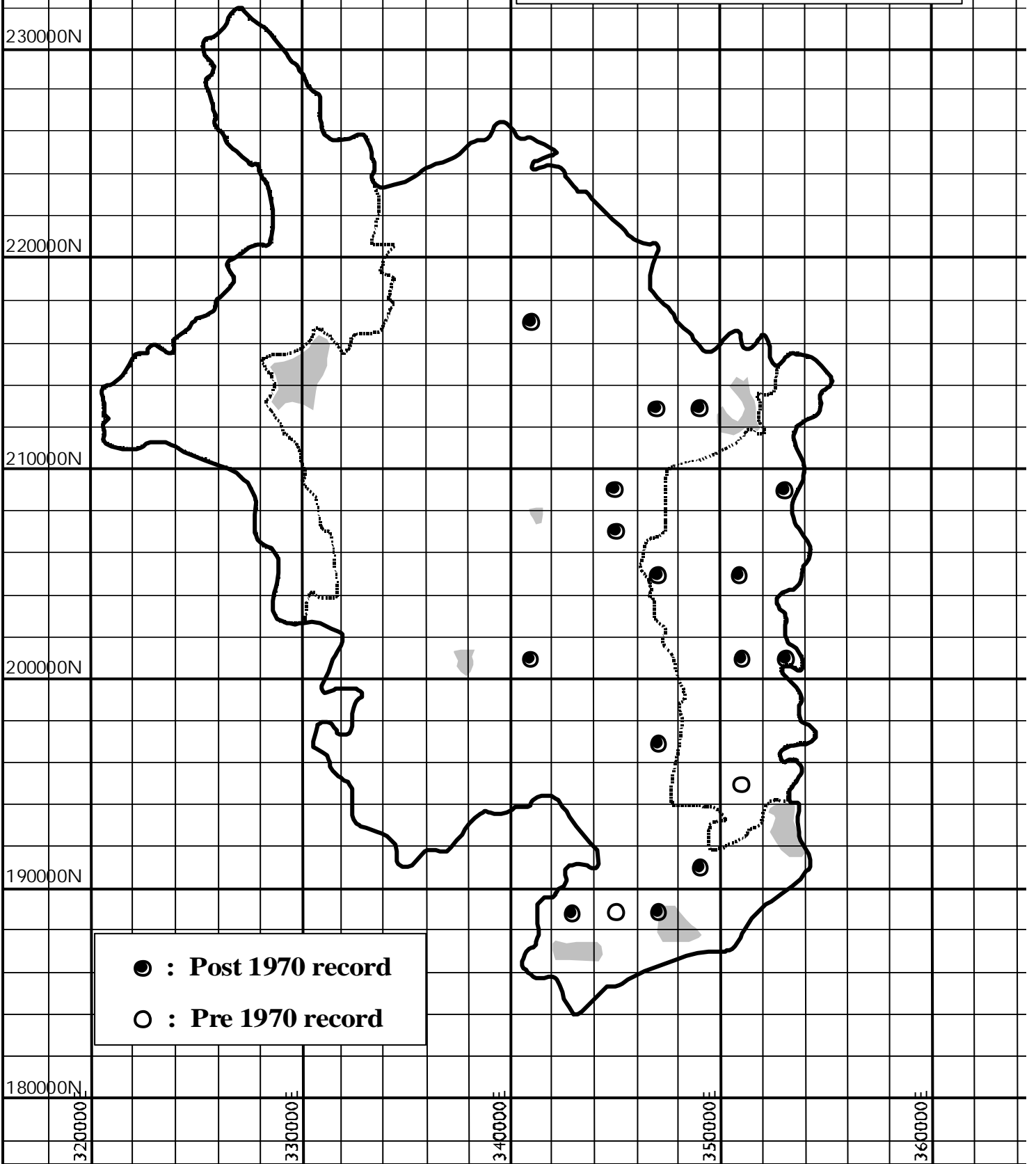
10. Sources of Information

The Rare Plant Register for Monmouthshire VC 35 compiled by Trevor Evans in 2002 was an invaluable source of information for this SAP. Site inventories in the GWT office were also inspected.

11. Consultations

Trevor Evans (BSBI Recorder for VC35) was consulted during the preparation of this plan.

GREATER BUTTERFLY ORCHID



Scale 1:250000

Appendix B-1 Grassland types in Monmouthshire as described by the National Vegetation Classification

Lowland neutral grassland

1. **MG5:** Crested Dog's tail grass and Black Knapweed dominated grassland, rich in a diversity of other plants such as Bird's-foot Trefoil and orchids.
2. **MG6:** Semi-improved grassland with Perennial Rye-grass and Crested Dog's tail, as well as White Clover and Ribwort Plantain. Some species-rich areas may still survive.
3. **MG1:** False Oat-grass grassland. A rank grassland but often species-rich, occurring particularly along road verges.
4. **MG10:** Yorkshire Fog and Soft Rush pasture. A damp grassland type, important for small mammals, breeding birds and invertebrates.

Dry acid grassland

1. **U1:** Sheep's Fescue, Common Bent and Sheep's Sorrel grassland
2. **U2:** Wavy Hair grass grassland
3. **U4:** Sheep's Fescue, Common Bent and Heath Bedstraw grassland. A species-rich grassland with a diversity of other plants as Sweet Vernal Grass and Field Woodrush. Managed mainly as rough grazing.

Calcareous Grassland

1. **CG3:** Upright Brome grassland. In the south and east of Monmouthshire on deeper soils
2. **CG6:** Downy Oat Grass with Yellow Oat grass, Quaking Grass, Rough Hawkbit, Ribwort Plantain and abundant Bird's Foot Trefoil. Small patches survive on more neutral, nutrient-enriched soils
3. **CG10:** Sheep's Fescue - Common Bent - Wild Thyme grassland. Occurs on base-rich substrates in upland areas and in enclosed areas fringing the uplands. An example is the grassland on the Skirrid.

Marshy grassland or Rhos pasture (Purple Moor grass and rush pasture).

Four distinct types of this grassland occur in Monmouthshire:

1. **M23:** Rush - Marsh Bedstraw pasture
2. **M25:** Purple Moor-grass-Tormentil mire, usually on the upland fringe
3. **M22:** Blunt-flowered Rush - Marsh Thistle fen meadow
4. **M24:** Purple Moor-grass-Meadow Thistle fen meadow. This habitat is listed on Annex 1 of the EC Habitats Directive

Appendix B-2 Scientific names of species mentioned in the text

PLANTS

Adder's Tongue Fern *Ophioglossum vulgatum*
Autumn Crocus or Meadow Saffron *Colchicum autumnale*
Autumn Ladies Tresses *Spiranthes Spiralis*
Blunt-flowered Rush *Juncus subnodulosus*
Chalk False-brome *Brachypodium pinnatum*
Common Bent *Agrostis capillaris*
Creeping Thistle *Cirsium arvense*
Crested Dog's tail grass *Cynosurus cristatus*
Crested Hair Grass *Koeleria cristata*
Black Knapweed *Centaurea nigra*
Bramble *Rubus spp.*
Cowslip *Primula veris*
Devil's-bit scabious *Succisa pratensis*
Docks *Rumex spp.*
Downy Oat Grass *Avenula pubescens*
Dyer's Greenweed *Genista tinctoria*
Field Woodrush *Luzula campestris*
Fragrant Orchid *Gymnadenia odorata*
Green-veined Orchid *Orchis morio*
Greater Butterfly Orchid *Platanthera chlorantha*
Hazel *Corylus avellana*
Indian or Himalayan Balsam *Impatiens glandulifera*
Japanese Knotweed *Reynoutria japonica*
Large Wild Thyme *Thymus pulegoides*
Lesser Butterfly Orchid *Platanthera bifolia*
Marsh Bedstraw *Galium palustre*
Marsh Thistle *Cirsium palustre*
Meadow Clary *Salvia pratensis*
Meadow Thistle *Cirsium dissectum*
Perennial Rye-grass *Lolium perenne*
Purple Moor-grass *Molinia caerulea*
Pyramidal Orchid *Anacamptis pyramidalis*
Quaking Grass *Briza media*
Ribwort Plantain *Plantago lanceolata*
Rough Hawkbit *Leontodon hispidus*
Rush *Juncus*
Sainfoin *Onobrychis viciifolia*
Sheep's Fescue *Festuca ovina*
Small Scabious *Scabiosa columbaria*
Soft Rush *Juncus effusus*
Sweet Vernal Grass *Anthoxanthum odoratum*
Tormentil *Potentilla erecta*

Upright Brome *Bromus erectus*
Wavy Hairgrass *Deschampsia flexuosa*
White Clover *Trifolium repens*
Wild Daffodil *Narcissus pseudonarcissus*
Wild Thyme *Thymus praecox*
Winter heliotrope *Petasites fragrans*
Yorkshire Fog *Holcus lanatus*

BUTTERFLIES

Common Blue *Polyommatus icarus*
Gatekeeper *Pyronia tithonus*
Large Skipper *Ochlodes venatus*
Meadow Brown *Maniola jurtina*
Marbled White *Melanargia galathea*
Marsh Fritillary *Eurodryas aurinia*
Ringlet *Aphanopus hyperantus*
Smll Copper *Lycaena phlaeas*
Small Skipper *Thymelicus flavus*
Dingy Skipper *Erynnis tages*
Grizzled Skipper *Pyrgus malvae*

MOTHS

Burnet Moth *Zygaena* spp
Cinnabar Moth *Tyria jacobaea*
Forester Moth *Adscita statices*

OTHER INVERTEBRATES

Glow-worm *Lampyrus noctiluca*
Great Green Bush Cricket *Tettigonia viridissima*
Hornet Robberfly *Asilus crabroniformis*
Yellow Meadow Ant *Lasius flavus*

AMPHIBIANS

Great Crested Newt *Triturus cristatus*

BIRDS

Curlew *Numenius arquata*
Green Woodpecker *Picus viridis*
Lapwing *Vanellus vanellus*
Linnet *Carduelis cannabina*
Redshank *Tringa totanus*
Skylark *Alauda arvensis*
Snipe *Gallinago gallinago*
Yellowhammer *Emberiza citrinella*

MAMMALS

Dormouse *Muscardinus avellanarius*

Greater Horseshoe Bat *Rhinolophus ferrumequinum*

Wood mouse *Apodemus sylvaticus*

Bank vole *Clethrionomys glareolus*

Grey squirrel *Sciurus carolinensis*

Harvest mouse *Micromys minutus*