

BUTTERFLY CONSERVATION
NORTHERN IRELAND BRANCH
REGIONAL ACTION PLAN

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Executive summary

This plan highlights the main conservation priorities for butterfly species in N. Ireland. The intention is for action and targets for high priority species to be implemented in the next five years, and medium priority within the next five to ten years. However, there may be unforeseen circumstances which will require action to be taken which is not apparent at this time.

The main conservation priorities identified in N. Ireland are as follows

a. Species Protection

- To identify core populations and important colonies of high and medium priority species
- To ensure these sites receive appropriate protection
- Promote ecological surveys of high and medium priority species
- Investigate taxonomic status of Irish populations
- Increase general level of moth recording

b. Monitoring

- To continue all current transect monitoring
- Increase monitoring for scarce species and poorly covered geographical areas
- Maintain branch databases

c. Liaison

- Collaborate with all Governmental and non-governmental bodies to ensure actions and targets identified in this plan are implemented
- Publish information relating to any survey and monitoring work
- Publicise work as widely as possible to increase profile of Butterfly Conservation in N. Ireland

1. Introduction

This regional action plan is one of a series being drawn up by Butterfly Conservation branches in consultation with staff at the Conservation Office. It follows the standard format adopted by Butterfly Conservation as detailed in Bourn et al (1996). These plans are part of the Action for Butterflies project which is supported by the World Wide Fund for Nature, English Nature, Scottish Natural Heritage and the Countryside Council for Wales.

2. Sources of information

The information in this plan has come from many sources within and without the N. Ireland Branch of Butterfly Conservation (referred hereafter as BC(NI)). Since acquiring copies of the RECORDER package for both the moth and butterfly recorders, BC(NI) has been actively building up the databases on both groups. Both the BC(NI) butterfly recorder, Trevor Boyd, and the moth recorder, Robert Thompson (up to 1997), have provided summary data for the respective groups. The process of assigning priorities to species was made simpler as it followed on from the compilation of two documents, Biodiversity in Northern Ireland Priorities for Wildlife Conservation (Browne et al 1997), to which BC(NI) was a major contributor, and the Northern Ireland Species Inventory for butterflies and larger moths (Nelson 1997). The latter was produced jointly by The Ulster Museum and the Northern Ireland Branch under contract to Environment and Heritage Service. Many people provided information in the form of records but Dave Allen and Ian Rippey deserve special mention for contributing very significantly to both documents. Nigel Bourn and Paul Kirkland have made very helpful comments on a draft of this document. Finally, Paul Waring has kindly provided information on the moth species.

3. Species Accounts - Butterflies

This section deals in detail only with all species assigned medium or high priorities. A brief summary of the status of some of the low priority species is given in section 3.6. For the high and medium priority species, the accounts cover Distribution and Status in Northern Ireland, Threats, Survey, Monitoring, Management and Actions and Targets.

3.1 Assigning of priorities

National Priorities for all butterfly species resident in the UK are given in Bourn *et al* (1997). The same priority is assigned to each species occurring within N. Ireland, except for the species which fulfil one of the following criteria. These species are assigned a higher regional priority. These criteria are as follows:

Criterion 1 species which have declined within the region by 32% in terms of numbers of occupied 10 km squares, or by 50% at tetrad or smaller level. For nearly all species in N. Ireland this information is not available due to lack of historical data. What is considered to be the trend for each species over the last 25 years is shown in Table 1.

Criterion 2 - if species occurs in less than 0.6% of tetrads OR species has less than 30 colonies. This equates in N. Ireland to 25 [check] tetrads.

Criterion 3 - if the region has more than 20% of UK sites for a species.

TABLE 1 Assessment of regional priority to resident butterfly species in N. Ireland

| | Population trend in last 25 years | Regional Rarity | Proportion National Population | National/Regional priority |
|--------------------------|-----------------------------------|-----------------|--------------------------------|----------------------------|
| Marsh Fritillary | ↓ | | | High/High |
| Wood White | ↑ | | YES | Med/High |
| Small Blue | = | YES | | Med/High |
| Large Heath | = | | | Med/Med |
| Purple Hairstreak | = | YES | | Low/Med |
| Green Hairstreak | ↓ | | | Low/Med |
| Brimstone | ↓ | YES | | Low/Med |
| Dingy Skipper | = | YES | | Low/Med |
| Wall Brown | ↓↓↓ | | | Low/Med |
| Silver-washed Fritillary | = | | | Low/Low |
| Holly Blue | = | | | Low/Low |
| Dark Green Fritillary | = | | | Low/Low |
| Grayling | = | | | Low/Low |
| Green-veined White | = | | | Low/Low |
| Large White | = | | | Low/Low |
| Meadow Brown | = | | | Low/Low |
| Orange Tip | = | | | Low/Low |
| Peacock | ↓ | | | Low/Low |
| Ringlet | = | | | Low/Low |
| Small Copper | = | | | Low/Low |
| Small Heath | = | | | Low/Low |
| Small Tortoiseshell | = | | | Low/Low |
| Small White | = | | | Low/Low |
| Speckled Wood | = | | | Low/Low |

3.2 High priority species nationally important

3.2.1 Marsh Fritillary *Eurodryas aurinia*

Distribution and Status - historically a widespread but probably always a local species. Previous records refer to occasional huge numbers of larvae, but no such reports for over 30yrs. The latest estimate is that there are 58 colonies in N. Ireland (Warren 1995). N. Ireland was identified as being one of the key areas for the species in UK in the National Species Action Plan. More detailed ecological information is included in the species national action plan (Barnett and Warren 1997).

Antrim: confined to margins of south Antrim hills and bogland around Lough Neagh

Armagh: found in scattered sites along Monaghan border, and more widely in fens and bogs in north of county and in the Upper Bann valley.

Down: widespread but very local, from Ards peninsula through fens and bogs in central drumlin belt to the edge of Mourne.

Fermanagh: present in western part of county around margins of upland areas, in central Arney River valley, in southern part of Upper Lough Erne with scattered colonies in lake margins in eastern Fermanagh.

Londonderry: absent from central upland areas in Sperrins. Present on sand dunes on North coast from Umbra to Magilligan and on bogs in SE of county.

Tyrone: largely absent from west except around Fairy Water bogs. The main distribution is in the eastern side of the county.

Threats - the main threat to the species is believed to be habitat loss but the imprecise nature of the species requirements in N. Ireland make this difficult to measure. In Britain inappropriate grazing of sites, either too heavy or abandonment, are major threats.

Survey - an attempt to survey this species was made by BC(NI) but no meaningful results emerged. The scattered and apparently ephemeral nature of colonies make this species a difficult one for BC(NI) members to survey.

Monitoring - the Marsh Fritillary is present on the Murlough transect route and has been monitored here since it colonised the site. Annual monitoring of the larval webs is also undertaken on this site. A number of other known colonies have been regularly visited but in a non-systematic way.

| Action | BC targets | Possible partners |
|---|------------------|--------------------------|
| 1. Undertake comprehensive survey as a matter of urgency | Complete by 2003 | EHS, Queen's University |
| 2. Monitor selected colonies | Ongoing | National Trust, UWT, EHS |
| 3. Identify and maintain core colonies | Complete by 2003 | EHS, Universities |
| 4. Determine habitat preferences | Complete by 2003 | EHS, Universities |
| 5. Ensure adequate protection for core colonies when identified | | EHS, DANI |

3.3 High priority species regionally important

3.3.1 Wood White *Leptidea sinapis*

Distribution and Status - a very widespread species in lowland districts of N. Ireland. Historically it was much less common and has spread out from several core areas since 1950. It is found in sheltered open grassy habitats, unlike in Britain where the species is typically found in open woodland. More detailed ecological information is included in the species national action plan (Warren and Bourn 1997).

Antrim: confined largely to lowland parts south of Antrim and Larne but extending along the coast as far north as Glenarm. It is also recorded along the north coast between Fair Head and Bushmills.

Armagh: recorded from all lowland areas.

Down: present in all of county except for Ards Peninsula and the Mournes.

Fermanagh: recorded in every 10km square, only avoiding most upland areas.

Tyrone: frequent in eastern lowlands, and Derg and Strule valleys in west. Unrecorded from upland areas in the Sperrins.

Londonderry: common in south-eastern lowlands around Lough Neagh and along Lower Bann valley and northern coast dune systems. Absent from upland areas and lower parts of Foyle valley.

Threats - not believed to be threatened. The species has historically increased in N. Ireland and there is no current evidence of a decline. The species is highly restricted in the rest of Britain and has declined by c30% in the last 25 years.

Survey - there have been no specific surveys done of this species.

Monitoring - the Wood White is present on 3 of the regular transect routes in N. Ireland.

| Action | BC's Targets | Possible Partners |
|--|--------------|--|
| 1. Encourage detailed ecological study of species | by 2005 | Universities, EHS |
| 2. Encourage genetic and taxonomic studies of Irish population | by 2005 | Ulster Museum, Universities |
| 3. Identify core areas for species | by 2005 | Universities, EHS |
| 4. Monitor selected colonies | Ongoing | Nature reserve wardens, local volunteers |

3.3.2 Small Blue *Cupido minimus*

Distribution and Status - always rare and only ever found in two areas of N. Ireland, in south Antrim and west Fermanagh. Loss of colonies in Antrim is unexplained. One Fermanagh colony was lost due to habitat change (Rippey 1986).

Antrim: extinct it is thought since the late 19th Century. Colonies were found along the basalt scarp on the north shore of Belfast Lough and on Islandmagee. Precise reasons for the extinction in this area are not known.

Armagh: never recorded.

Down: no confirmed records.

Fermanagh: one extant and one extinct colony.

Londonderry: never recorded.

Tyrone: never recorded.

Threats - the NI population is clearly precarious as it is confined to a single site. The main threat to the survival of this colony is habitat change. Nelson (1995) recommended that the current regime of low intensity cattle grazing is continued.

Surveys - no specific surveys have been done, but the former range within Antrim has been searched in a non-systematic manner for undetected colonies without success. A detailed survey of the Monawilkin colony was done in 1995 (Nelson 1995).

Monitoring - the Monawilkin colony is surveyed annually by counting egg production following the recommendation in Nelson (1995). There have been recorded visits by local members of BC(NI) to confirm the continued existence of the colony for at least 20 years.

| Action | BC's Targets | Possible Partners |
|--|---------------------|--------------------------|
| 1. Monitor colony | Ongoing | Local members |
| 2. Maintain current management | Ongoing | EHS |
| 3. Seek to increase control over management on sole site | by 1999 | EHS |
| 4. Survey former range for possible reintroduction sites | by 2000 | Local volunteers, NT |

3.4 Medium priority species nationally important

3.4.1 Large Heath *Coenonympha tullia*

Distribution and Status - always a species of the north and west occurring from north Antrim south-west through Sperrins to Fermanagh on blanket and lowland raised bog. Any declines are masked by the discovery of previously unrecorded colonies. More detailed ecological information is included in the species national action plan (Bourn and Warren 1997).

Antrim: restricted to blanket and raised bog in north of county and Lower Bann valley.

Armagh: one site at Mullenakill NNR within Peatlands Park in NW of county.

Down: never recorded

Fermanagh: widespread in lowland raised bogs and upland heath and blanket bog in north and west.

Londonderry: found along eastern edge of Sperrins and bogs in Maghera area and along Lower Bann. Recent records from western Sperrins suggest that it may be more widespread.

Tyrone: widespread in lowland raised bogs and upland blanket bog though central spine of Sperrins with isolated populations west of Castlederg and in peatlands along Blackwater valley.

Threats - peat-cutting and overgrazing are believed to be the main threats to this species, but the impact of these activities has not been quantified.

Surveys - no surveys have been done of this species.

Monitoring - not covered by any current monitoring project.

| Action | BC's Targets | Possible Partners |
|--|--------------|---|
| 1. Conduct detailed survey within range | by 2002 | Universities, EHS, DANI, local volunteers |
| 2. Determine precise habitat preferences | by 2002 | Universities, EHS, DANI |
| 3. Identify core areas and major colonies. | by 2002 | Universities, EHS DANI |
| 4. Ensure protection for these sites | by 2005 | Universities, EHS DANI |
| 5. Monitor selected colonies | by 1999 | EHS |

3.5 Medium priority species regionally important

3.5.1 Brimstone *Gonepteryx rhamni*

Distribution and Status - the only breeding records have been on the lake shores and ungrazed islands of Lough Erne especially the central part of Upper Lough Erne. Records from other counties refer to strays of unknown origin. The Lough Erne basin has the only native population of the foodplant purging buckthorn *Rhamnus catharticus* in N. Ireland. It appears that the Fermanagh populations become temporarily established from the permanent populations existing in central Ireland. There have been no records from the Fermanagh breeding localities since 1985.

Antrim: vagrants only.

Armagh: vagrants only.

Down: vagrants only.

Fermanagh: found in Upper Lough Erne basin especially in the Crom area and in islands in central part of the lough. Eggs were reported on foodplants in Lower Lough Erne, but few adults were ever reported on this lough. There have been no confirmed records anywhere in the county since 1985.

Londonderry: vagrants only.

Tyrone: vagrants only.

Threats - none known. Habitat appears secure at least within protected areas and on islands.

Surveys - population was studied in mid-1980s in non-systematic way by local volunteers and it was found to be breeding widely on the shores and island in both Upper and Lower Lough Erne.

Monitoring - none. Population is currently extinct.

| Action | BC's Targets | Possible Partners |
|---|--------------|---------------------------------|
| 1. Maintain habitat in core areas in Upper and Lower Lough Erne | ongoing | EHS, NT, local landowners, RSPB |
| 2. If species re-colonises monitor population where possible | reactive | |
| 3. Reassess needs if re-establishment occurs | reactive | |

3.5.2 Dingy Skipper *Erynnis tages*

Distribution and Status - only ever recorded from limestone districts of Fermanagh where it is found in natural grasslands on limestone and in suitable habitat on roadside cuttings and quarries. There is no evidence of any historical change in status and distribution.

Antrim: no records.

Armagh: no records.

Down: no records.

Fermanagh: approximately 25 colonies found mostly in north western part of county, north of a line from Knockninny to Belcoo.

Londonderry: no records.

Tyrone: no records.

Threats - grassland improvement likely to be threat but this is unquantified.

Surveys - none have been undertaken.

Monitoring - none in operation.

| Action | BC's Targets | Possible Partners |
|--|--------------|-------------------|
| 1. Map and document known colonies | by 1999 | Local volunteers |
| 2. Determine habitat choice | by 1999 | Local volunteers |
| 3. Ensure roadside colonies are notified to Road Service and suitable management implemented | by 1999 | Local volunteers |

3.5.3 Green Hairstreak *Callophrys rubi*

Distribution and Status - widespread especially in western counties but avoiding highest ground. Mainly found in margins of uplands and on cutover bogs. Believed to be declining but this is not quantified and any declines are masked by the finding of previously unrecorded colonies.

Antrim: confined to scattered colonies on cutover bogs in Lower Bann valley. Absent from all upland in the county.

Armagh: colonies are found on cutover bogs in the north of the county and along the Monaghan border.

Down: present in the Mourne and in cutover bogs and fens in the Saintfield and Comber area.

Fermanagh: widespread in suitable habitat throughout county.

Londonderry: colonies exist on bogs and heaths in the south-east and along the edge of Sperrins.

Tyrone: widespread, found in suitable sites throughout county.

Threats - imprecisely known but habitat loss is possibly significant.

Surveys - no surveys have been done of this species.

Monitoring - this species is not present on any currently monitored site.

| Action | BC's Targets | Possible Partners |
|--|--------------|-------------------|
| 1. Survey and identify any large colonies of species | by 2008 | Local volunteers |
| 2. Re-assess needs when this completed | by 2008 | |

3.5.4 Purple Hairstreak *Quercusia quercus*

Distribution and Status - an arboreal species which can be difficult to detect. It is known to occur in just a few oakwoods in Fermanagh and Londonderry. Records from other counties have never been confirmed, but suitable habitat does exist in all counties. The recent discovery of the species in Londonderry suggests it is still under-recorded. It is possible that the regional priority will need to be re-assessed when survey work is complete.

Antrim: no records.

Armagh: no confirmed records.

Down: no records.

Fermanagh: first recorded in 1893. Found on the Crom Estate in many of the woods, Correl Glen NNR and on a wooded island in Lower Lough Erne.

Londonderry: first recorded in 1997 at Ness Wood. There are other suitable sites in the area.

Tyrone: no records.

Threats - there are no known threats as major colonies are all in protected sites.

Survey - no systematic survey has been done for this species, but it is searched for annually by local members.

Monitoring - this species is not present on any currently monitored site. Transect monitoring is not appropriate for this canopy-inhabiting species.

| Action | BC's Targets | Possible Partners |
|---|--------------|-------------------|
| 1. Survey suitable oak woodland especially in western counties for additional sites | by 2003 | Local volunteers |
| 2. Re assess needs when this completed | | |

3.5.6 Wall Brown *Lasiommata megera*

Distribution and Status - formerly a common butterfly of dry grassland in the south and east and along the north coast. It was always much less common in the western counties. It has undergone a major contraction in range since 1980 with an estimated 80% loss of occupied 10km squares. The range has contracted away from north coast and most inland sites, so that it is only found from Islandmagee south to Newcastle, Co. Down apart from a few scattered inland colonies in Down and Armagh. This decline and re-expansion is part of a natural, periodic trend affecting much of the British Isles which has occurred at least 3 times this century. The ecology of this species would suggest it should benefit from global warming, so the reasons for the current decline are unclear.

Antrim: confined to the coast apart from in the south of the county. Now much scarcer and rarely recorded in recent years and only on coast south of Larne.

Armagh: formerly widespread now known from just a few quarry sites near Armagh city.

Down: formerly widespread on coast and inland in suitable habitat. Now confined to coast.

Fermanagh: confined to dry grassland sites in western limestone areas. No post 1990 records.

Londonderry: scarce confined to coast and isolated inland sites in the south-east. Few recent records, but one on north coast in 1996 may indicate small colonies may persist.

Tyrone: always rare in this county and there have been no recent records.

Threats -none quantified. There would still seem to be suitable habitat within the species past and current range.

Surveys - no surveys have been done of this species.

Monitoring- the species is present on 2 transects at Murlough and Killard, Co. Down.

| Action | BC's Targets | Possible Partners |
|--|--------------|-------------------|
| 1. Monitor population especially outside core areas in Co. Down | by 2002 | Local volunteers |
| 2. Determine habitat choice | by 2002 | Local volunteers |
| 3. Ensure compatible management for species within protected coastal sites | by 2005 | EHS, NT |

3.6 Low Priority Species

Brief comments are made on selected low priority species.

3.6.1 Dark Green Fritillary *Argynnis aglaja*

Common on coastal dunes where populations appear stable. Also found inland but these populations are less well known and may have declined. However on the current evidence this species appears not to justify a higher regional priority.

3.6.2 Grayling *Hipparchia semele*

This species occurs along entire coastline of N. Ireland, including Rathlin Island. There are also inland populations on heaths in south Down and on limestone grassland in Fermanagh. Populations appear stable at least on the coast and whilst there may have been declines inland, it has not shown any major changes in its historic range. A higher regional priority does not appear justified.

3.6.3 Holly Blue *Celastrina argiolus*

The Holly Blue is specially protected in N. Ireland under the Wildlife Order (1985). The species is confined to eastern and south Down and Fermanagh. There is an old record for Tyrone. The population appears secure within its stronghold in Co. Down and the relatively recent finding of the species in Fermanagh suggests it may still be found in other parts of N. Ireland. There would appear on current evidence, no justification in assigning this species to a higher regional category.

3.6.4 Peacock *Inachis io*

For a time in the mid-1980s this species undoubtedly was in severe decline. It did continue to survive in Fermanagh, and the lack of recording here perhaps exaggerated its rarity. Since the early 1990s the species has become more numerous and regained much of its former range. This cyclical pattern in abundance is a feature of this species. It does not merit including in a higher regional priority at present.

3.6.5 Silver-washed Fritillary *Argynnis paphia*

This large woodland fritillary is still relatively common in N. Ireland. Whilst numbers seen at individual sites fluctuate from year to year, there is no evidence of any significant recent decline. A number of core sites are protected, so its current regional priority appears justified.

4. Species accounts - Moths

4.1 Assigning of priorities

In 1996 BC(NI) compiled a list of moths considered to be of conservation concern in N. Ireland. This was included in the N. Ireland Biodiversity list (Browne *et al* 1997) and is included in full here in Appendix 1. The list included all moths recorded in N. Ireland which appear on the UKSG Biodiversity lists, plus species considered rare within N. Ireland itself. Species are classified as being high priority if they appear on the draft list of nationally scarce and threatened moths. The medium priority list includes all the remaining species from the NI Biodiversity list. It should be noted that for most moths the lack of modern records, information on the current trends in the species population and ecological data make it particularly difficult to assign species to threat categories.

4.2 Moth species - High priority

4.2.1 Crescent Striped *Apamea oblonga*

Distribution and status - this is a saltmarsh species, apparently confined to the east coast of Ireland from Waterford north to Antrim. The larvae feed on saltmarsh grasses *Puccinellia* sp. There are only two old N. Irish records from Belfast and Rostrevor. The loss of saltmarsh habitat may have resulted in a decline in this species.

Threats - loss of saltmarsh habitat through reclamation.

Management - precise management unknown.

| Action | BC's targets | Possible Partners |
|--|--------------|---------------------|
| Survey to locate any extant colonies giving priority to historical sites | By 2003 | EHS, National Trust |
| Ensure protection of any colonies | | |

4.2.2 Straw Belle *Aspitates gilvaria*

Distribution and status - very rare and possibly extinct, only recorded once at Magilligan, Co. Londonderry. The species has a mainly southern distribution in Ireland and overall it is considered rare except in the Burren. The habitat is dry usually calcareous grassland. Some old records in Britain have been shown to be misidentifications and others are believed to refer to strays. Either could be the case with this record.

Threats - none known as status very unclear. Habitat loss is the major cause of decline in Britain.

Management - requires unimproved grassland.

| Action | BC's targets | Possible Partners |
|---|--------------|-------------------|
| Search for extant colonies extending search to limestone areas of Fermanagh | By 2003 | EHS |
| Ensure protection of any colonies | | |

4.2.3 Slender-striped Rufous *Coenocalpe lapidata*

Distribution and status - an upland species recorded from the Fermanagh and Belfast hills. There are no recent records and its status is unclear. It is a northern species found in moorland and upland pasture in Britain but its foodplant is unknown though it is probably meadow buttercup *Ranunculus acris*.

Threats - unclear in absence of known colonies.

Management - needs still unclear though appears to require wetter flushed areas.

| Action | BC's targets | Possible Partners |
|--|--------------|--|
| Survey to locate any extant colonies giving priority to historical sites | by 2000 | Local volunteers, Fermanagh Dist Council |
| Ensure protection of any colonies | | EHS, FDC |

4.2.4 Small Eggar *Eriogaster lanestris*

Distribution and status - only present at the Umbra, Co. Londonderry but there are old records from Fermanagh and east Down. Most of the reports refer to the larval webs which are usually found on blackthorn *Prunus spinosa*. The adults fly in late winter/early spring. Egg masses and larvae need full sun, so avoided shaded sites, but also do require some degree of shelter

Threats - grubbing out of scrub and hedgerows and inappropriate management of hedges is major threat particularly mechanical cutting in spring.

Management - requires open sunny bushes.

| Action | BC's targets | Possible Partners |
|--|--------------|-------------------|
| Ensure appropriate management on remaining site | By 1998 | UWT |
| Conduct detailed mapping of extent of colony | by 1998 | UWT |
| Survey to locate any extant colonies giving priority to historical sites | ongoing | Local volunteers |
| Investigate setting up satellite populations on other suitable sites | by 2003 | UWT, EHS |

4.2.5 Valerian Pug *Eupithecia valerianata*

Distribution and status - two trapped at Brackagh Bog in 1995 were the first and only N. Irish record. Could be expected at other fenland sites with common valerian *Valeriana officinalis*. Feeds on flowers and developing fruits of foodplant.

Threats - none apparent on only known site.

Management - requires stands of foodplant that flower and set seed. Periodic disturbance may be needed for plant in which to seed.

| Action | BC's targets | Possible Partners |
|--|--------------|-------------------|
| Survey other fenland site for possible other colonies | by 2003 | |
| Ensure species needs are catered for in management at Brackagh | by 2003 | EHS |

4.2.6 Narrow-bordered Bee Hawk-moth *Hemaris tityus*

Distribution and status - a day-flying resident species which has certainly declined. Old records indicate a wide but scattered distribution. Most recent records are from Fermanagh in areas of unimproved grassland and the edges of bogs. Larvae feed on devil's-bit scabious *Succisa pratensis*. Seems to select plants growing at edge of habitat features such as banks. Possibly requires large areas of habitat as adults occur at low density.

Threats - fragmentation and loss of remaining habitat is the main threat.

Management - may require large areas of habitat to ensure adequate supply of food plants in right conditions for egg-laying

| Action | BC's targets | Possible Partners |
|--|--------------|-------------------|
| Identify core areas | by 2003 | |
| Ensure appropriate management on known sites | by 2003 | EHS |

4.2.7 Belted Beauty *Lycia zonaria*

Distribution and status - only recorded at the end of nineteenth century at Ballycastle, Co. Antrim. This is isolated from the other Irish populations in Galway and Mayo. Feeds on herbaceous species such as bird's foot trefoil *Lotus corniculatus* and kidney vetch *Anthyllis vulneraria* growing at seaward edge of dunes where there is bare ground.

Threats - none known in the absence of any extant NI populations. Losses in Britain have been ascribed to habitat loss, increased stability of dunes, and changes in farming practices creating more uniform closed grassland swards.

Management - requires open areas of ground with foodplant.

| Action | BC's targets | Possible Partners |
|---|--------------|-------------------|
| Survey sites at Ballycastle to determine if species still present | by 1998 | Local volunteers |
| Survey other north coast sites for undetected colonies. | by 2003 | |
| Re-evaluate plan on basis of survey results. | | |

4.2.8 Lunar Yellow Underwing *Noctua orbona*

Distribution and status - Baynes refers to records of this species including one from Fermanagh which was re-identified as an aberrant *N. pronuba*. Since 1977 the species has been reported from single localities in Antrim (Rathlin I.), Down (Killard Point) and Londonderry (Traad Point). This species feeds especially on grasses in larval stage. Adults apparently aestivate, though where this occurs is not known.

Threats - the reasons for its decline in Britain are unclear and until any extant populations are discovered, these cannot be quantified in N. Ireland.

Management - habitat needs are imprecisely known but appears to favour open grasslands.

| Action | BC's targets | Possible Partners |
|---|--------------|-------------------|
| Establish true status by trapping in reported sites | by 2003 | |
| Ensure adequate protection for any populations | | EHS |

4.2.9 Pretty Pinion *Perizoma blandiata*

Distribution and status - recorded in Fermanagh in 1992 at Lisblake bog, the first N. Irish record for over 30 years. Previously recorded in Antrim, Down and Tyrone. The larva feeds on eyebrights *Euphrasia* spp. which are not bogland species, so the Fermanagh record probably refers to a stray from nearby limestone hills.

Threats - grassland improvement is probably major threat to this species.

Management - unimproved limestone grassland required, but precise management unknown.

| Action | BC's targets | Possible Partners |
|---|--------------|-------------------|
| Survey suitable sites in Fermanagh for colonies | By 2003 | EHS |
| Ensure any colonies receive protection | | |

4.2.10 Argent and Sable *Rheumaptera hastata*

Distribution and status - Baynes states this to be 'not uncommon in boggy areas' and there are published old records from Fermanagh, Tyrone and the Mourne. The recorded foodplants are birch and bog myrtle. It is day-flying species and the lack of recent records suggests a decline. There appears to be some confusion as to which sub-species occurs in Ireland.

Threats - the major cause of decline in Britain has been loss of pioneer stands of birch which is the main foodplant in southern Britain. In the west including Ireland populations tend to feed on Bog Myrtle and specific threats include overgrazing and loss of wet heaths and bogs.

Management - requires pioneer stands of birch and large stands of bog myrtle.

| Action | BC's targets | Possible Partners |
|--|--------------|----------------------------|
| Survey to locate any extant colonies giving priority to historical sites | by 2005 | |
| Review plan if colonies discovered | by 2005 | |
| Investigate taxonomic status of Irish population | by 2005 | Ulster Museum, NMI, Dublin |

4.2.11 Bordered Grey *Selidosema brunnearia*

Distribution and status - Rare confined to Peatlands Park, north Armagh and a nearby bog at Derryloughan, in East Tyrone. Specimens from Derryloughan collected in 1940s are apparently smaller than the normal race and have been given subspecific status *tyronensis*. The original site apparently no longer exists. In Britain this species occurs on heaths and grassland feeding respectively, on heather *Calluna vulgaris* and herbaceous plants such as *Lotus corniculatus*. At the NI sites it presumably feeds on *Calluna vulgaris*.

Threats- apparently extinct on the Tyrone site, but still present on Peatlands Park.

Management - ensure appropriate management at only known site. The species could be used as a flagship one to promote local bogland conservation because of its claimed sub-specific status.

| Action | BC's targets | Possible Partners |
|---|--------------|-------------------|
| Investigate taxonomic position of race | | Ulster Museum |
| Ensure appropriate management at Peatlands Park | by 2000 | EHS |
| Investigate status in other bogs in north Armagh/south Tyrone | by 2003 | |

4.2.12 White Colon *Sideris albicolon*

Distribution and status - a coastal species recorded in the past though not recently from all coastal counties. In Britain, the species is found on sandy coasts and inland sites with sandy soils, and the larvae have been reported feeding on a wide variety of duneland plants. Seems to need areas of bare sand close to foodplant.

Threats -loss of bare ground seems to be important so stabilisation of dunes systems is probably a major threat.

Management - requires areas of bare ground so disturbance is required to maintain suitable habitat.

| Action | BC's targets | Possible Partners |
|--|--------------|-------------------|
| Survey to locate any extant colonies giving priority to historical sites | by 2003 | NT, EHS |
| Re-evaluate plan on basis of survey results. | | |

4.2.13 Red-tipped Clearwing *Synathedon formicaeformis*

Distribution and status - known only from one site, Brackagh Bog NNR, Co. Armagh, where discovered in late 1980s. Species feeds on wood of willows including *Salix caprea* and *S. cinerea*. Associated particularly with damaged trees as presumably larvae gain entry through injury points.

Threats - none known on existing site as willow is plentiful

Management - ensure cuttings and dead trees are retained on site.

| Action | BC's targets | Possible Partners |
|--|---------------------|--------------------------|
| Ensure appropriate management on only known site to maintain species | By 2000 | EHS |
| Search other suitable sites for colonies | by 2003 | |

4.3 Moth Species - Medium priority

The following moths are assigned medium priority. The counties in which they occur are given in the table. These species are included in the N. Ireland Biodiversity list (Browne et al 1997) The status and target statement for these species is given in Appendix 1.

| Species | County distribution |
|--|---------------------|
| Clouded Magpie <i>Abraxas sylvata</i> | AN DO TY |
| Light Knot-grass <i>Acronicta menyanthidis</i> | AN AR LD TY |
| The Forester <i>Adscita statures</i> | AN AR FE TY |
| The Confused <i>Apamea furva</i> | AN LD TY |
| Red-necked Footman <i>Atolmis rubricollis</i> | AR FE TY |
| Small White Wave <i>Asthena albulata</i> | DO FE LD |
| Oak Beauty <i>Biston strataria</i> | AR DO FE TY |
| The Sprawler <i>Brachionycha sphinx</i> | FE TY |
| Beech-green Carpet <i>Colostygia olivata</i> | AR DO FE |
| Small Elephant Hawk-moth <i>Deilephila porcellus</i> | AR DO LD |
| Clouded Buff <i>Diacrisia sannio</i> | AN FE LD |
| Fen Square-spot <i>Diarsia florida</i> | AN |
| Dark Tussock <i>Dicallomera fascelina</i> | AR FE TY |
| Lunar Marbled Brown <i>Drymonia ruficornis</i> | AN AR DO FE |
| Common Footman <i>Eilema lurideola</i> | AN DO |
| Dingy Shears <i>Enargia ypsilon</i> | AN LD |
| Yellow-ringed Carpet <i>Entephria flavicinctata</i> | AN FE |
| Feathered Ranunculus <i>Eumichtis lichenea</i> | DO |
| Yellow Tail <i>Euproctis similis</i> | DO |
| Square-spot Dart <i>Euxoa obelisca</i> | AN DO LD |
| Netted Pug <i>Eupithecia venosata</i> | AN DO LD TY |
| The Olive <i>Ipimorpha subtusa</i> | AN AR FE TY |
| Beautiful Brocade <i>Lacanobia contigua</i> | AN DO FE |
| Least Yellow Underwing <i>Noctua interjecta</i> | DO TY |
| Portland Moth <i>Ochropleura praecox</i> | AN DO LD |
| Chimney Sweeper <i>Odezia atrata</i> | AN TY |
| Scarce Prominent <i>Odontotia carmelita</i> | FE |
| Wood Tiger <i>Parasemia plantaginis</i> | AN AR DO FE LD TY |
| Grass Wave <i>Perconia strigillaria</i> | AR AN DO FE TY |
| Small Purple-barred <i>Phytometra viridaria</i> | AR AN DO FE TY |
| Cream Wave <i>Scopula floslactata</i> | DO |
| Lesser Cream Wave <i>Scopula immutata</i> | AR DO |
| Mullein Wave <i>Scopula marginepunctata</i> | AN DO |
| Lunar Hornet Moth <i>Sesia bembeciformis</i> | DO FE |
| Thrift Clearwing <i>Synathedon muscaeformis</i> | AN |
| Poplar Lutestring <i>Tethea or</i> | AN DO FE |
| Pale Eggar <i>Trichiura crataegi</i> | FE |

5. Key areas for butterflies and moths in the region

This section highlights the key areas for butterflies and moths in each of the counties of N. Ireland. It should not be regarded as an exhaustive account. A more complete analysis of the distribution patterns of Lepidoptera species in N. Ireland is needed before the areas supporting notable concentrations of medium and high priority species can all be identified. It is also true to say that important sites are often isolated within large blocks of unfavourable habitat, and the colonies of many of our still quite widely dispersed, but declining, species, do not occur within easily defined areas.

5.1 Antrim

Much of the centre of Co. Antrim is upland with acid grassland and blanket bog, much of it planted with conifers, supporting few priority Lepidoptera species. In the lowland areas around Lough Neagh and the Lower Bann valley there are scattered colonies of Marsh Fritillary and Green Hairstreak. The coast, particularly on the north, is mostly rocky with semi-natural habitats restricted to the relatively inaccessible slopes. Colonies of the Wall Brown may still exist here. Heathland was once common along the north coast but now is extensive only on Rathlin I., where a number of priority moths are present. There are some large blocks of woodland within the Antrim glens, with those in Glenarm the best studied.

5.2 Armagh

The northern half of Armagh is low-lying especially along the Lough Neagh shore. Remnant areas of peat bog and fens support important colonies of several priority wetland species. Peatlands Park and Brackagh Bog are both important sites, but even small areas of bog can hold colonies of Green Hairstreak. In the more hilly south there are areas of upland heath, grassland and woodland especially in the Slieve Gullion ESA and there are again some important wetlands along the Armagh/Monaghan border with colonies of Marsh Fritillary and Narrow bordered Bee Hawk Moth. The limestone areas of central Armagh do not support the specialities found in Fermanagh, but a few inland colonies of the Wall Brown still survive in this area.

5.3 Down

Much of lowland county Down is intensively farmed, but throughout the central drumlin belt of the county are numerous small wetlands, which are thought to support one of the main concentrations of Marsh Fritillary colonies in N. Ireland. Many priority species are found in the sand dunes around Dundrum Bay particularly at Murlough NNR. This is the most intensively studied butterfly site in N. Ireland. Killard Point at the mouth of Strangford Lough is another important site. The rocky uncultivated headlands on the north Down coast have the main concentration of Wall Brown colonies in N. Ireland.

The Mourne is the largest area of heathland in N. Ireland. Most of the valuable habitat lies on the lower slopes where there are stands of semi-natural woodland and large areas of wet and dry heath. There has been a gradual loss and fragmentation of the heathland on the lowest and most accessible land, but much still remains especially on the western flanks and the steep slopes to the south of Newcastle. Several priority upland species are found in the Mourne. Some locally important woodlands are found on the edge of the Mourne.

5.4 Fermanagh

Populations of all the high and medium priority butterfly species have been found in Fermanagh. The north-western part of the county is especially important. Here are found the only N. Irish populations of the two limestone-dependant butterflies, the Small Blue and Dingy Skipper plus colonies of a number of other priority Lepidoptera species. The woodlands on the Crom estate are the outstanding woodland area in N. Ireland with important colonies of many woodland species. Although many of these species are known from other sites the populations here are probably larger than anywhere else because of the extent and quality of the habitats. Whilst the populations of species dependant on these two habitats are well known the status of many wetland species in Fermanagh is unclear.

5.5 Londonderry

The most important single area in Londonderry is the coastal strip from Magilligan to Castlerock. The dunes here support a number of priority moth and butterfly species and have a different character and fauna to the Co. Down dunes. The blanket bogs in the Sperrins which extend into Co. Tyrone support the majority of N. Irish colonies of the Large Heath. This species is also found on raised bogs in the SE of the county. Woodlands are a feature of many of the glens in the Sperrins, but they are relatively unstudied as the recent discovery of the Purple Hairstreak indicates.

5.6 Tyrone

The important habitats in Tyrone are the remnant bogs in the Lough Neagh basin, the blanket and raised bogs in the Sperrins, the Fairy Water valley and in the far west of the county. Colonies of the Large Heath and Green Hairstreak are found throughout these areas. Recent survey work as highlighted the local importance of lake margins and upland margins in the south of the county.

6. Survey

Very few systematic surveys have been done of butterflies in N. Ireland. Lack of detailed historical and up to date information and the often non-systematic nature of the information still hinders the interpretation of distributional data and makes assessment of population trends difficult if not impossible. It is however fair to say that our knowledge accumulated over the last 20 years by BC(NI) and other naturalists is much better than ever. Population trends should be easier to determine as this accumulated data is kept on an actively maintained computerised database.

There are survey needs for most of the high and low priority species. These are in general beyond the scope of BC(NI) and as outlined in the targets for each species, do require assistance from other bodies in terms of time and financial resources. Priority species for surveys are the Marsh Fritillary, Large Heath and Wall Brown butterflies and the Belted Beauty, Slender Striped Rufous and Small Eggar moths.

7. Monitoring

The general monitoring of the butterfly populations in N. Ireland has been reasonably good through the efficient and long-running operation of some transects. The number of regularly walked routes in recent years has been between 6 and 8. However, data from only one site, Murlough NNR, has been fed into the national butterfly monitoring scheme. The other data gathered in N. Ireland has not been systematically analysed, a situation which should receive priority attention.

Monitoring of the Small Blue colony at Monawilkin by egg counts started in 1995 and this will be undertaken annually by BC(NI). National Trust Staff at Murlough NNR have been monitoring the colony of the Marsh Fritillary since the early 1980s. No other monitoring of individual species or site is known about.

8. Management

There is little active management for butterflies on reserves in N. Ireland. Some reserves were established primarily for the butterfly interest whilst others have subsequently been shown to be of major interest.

9. Other Activities

The following aspects are seen as essential activities for BC(NI).

Publicity and membership - BC(NI) actively publicises itself and its activities and seeks to increase its membership.

Reserves - the financial resources mean that BC(NI) is not in a position to acquire or manage land, but it should seek to influence and advise other NGOs about reserve management for Lepidoptera.

Information- BC(NI) will continue to produce annual butterfly and moth reports and to facilitate the production of scientific and popular accounts about the Lepidoptera of N. Ireland. The analysis of the data gathered by all the butterfly monitoring walks is seen as a priority within the first five year period of this plan. Increasing the expertise and encouraging greater contact amongst fieldworkers particularly in moths is seen as a priority.

10. Review

This plan will be subject to annual review of progress by BC(NI) and a major five-yearly review by BC(NI) in consultation with the Conservation Office.

11. Appendices

Appendix 1

List of moth species included in Biodiversity in Northern Ireland Priorities for Wildlife Conservation (Browne et al 1997) with status and action statements. This species are assigned Medium priority in this plan.

Abraxas sylvata (Clouded Magpie). Very scarce present at 5 sites in 3 counties, though possibly occurs more widely where Elm is abundant. Maintain all known sites .

Acrionicta menyanthidis (Light Knot-grass). A northern and western species recorded from a few sites in four counties. Monitor known populations and search old sites.

Adscita statices (The Forester). A local and declining species of damp meadows. Maintain range, protect and monitor at best known localities.

Apamea furva (The Confused). Only one recent record from Rathlin I. There are old records from 3 other counties. Determine current status.

Atolmis rubricollis (Red-necked Footman). A very local woodland species with recent records from Tyrone and Armagh and older records from Fermanagh. Assess current status and distribution.

Asthena albulata (Small White Wave). A hazel-feeder confined to a few localities in Down, Londonderry and Fermanagh. Establish true status and protect known sites.

Biston strataria (Oak Beauty). Only recently recorded from Fermanagh and Down. Protect existing populations and search old sites.

Brachionycha sphinx (The Sprawler). Only at Crom in Fermanagh. Protect and maintain population.

Colostygia olivata (Beech-green Carpet). Only one recent record. Ascertain current status; search old sites and protect any extant sites.

Deilephila porcellus (Small Elephant Hawk-moth). Apart from one inland record confined to coastal sites in north Londonderry and Down. Determine current status and protect any known populations.

Diacrisia sannio (Clouded Buff). Only recorded from 3 bogs in Fermanagh and Londonderry. Monitor and maintain at known sites.

Diarsia florida (Fen Square-spot). A northern and western species. In Ireland only on Rathlin I. and Kerry. Determine true status.

Dicallomera fascelina (Dark Tussock). A bogland species apparently confined to north Armagh and adjacent area of East Tyrone with old record from Fermanagh. Determine status and monitor all populations.

Drymonia ruficornis (Lunar Marbled Brown). An oak woodland species recently recorded in Armagh and Fermanagh. Maintain at existing sites.

Eilema lurideola (Common Footman). Confined to coasts of Rathlin I. and east Down. Protect and maintain existing sites.

Enargia ypsilon (Dingy Shears). Confined to a few widely scattered sites on east coast of Ireland. Only two recent Irish records both in NI. Monitor and protect existing sites.

Entephria flavicinctata (Yellow-ringed Carpet). In Ireland only known from NE Antrim and

Fermanagh. Monitor and protect at all known sites; search old localities.

Eumichtis lichenea (Feathered Ranunculus). Known from 3 sites on east Down coast. Maintain existing populations and survey other suitable sites.

Euproctis similis (Yellow Tail). Found on coast of Co. Down. Possibly increasing. Monitor population.

Euxoa obelisca (Square-spot Dart). A coastal species known from just four Irish counties including Londonderry and Antrim. Establish true status and protect all known sites.

Eupithecia venosata (Netted Pug). A coastal species only recorded in recent years from Rathlin I. Determine true status and search old sites. Monitor and protect at best known sites.

Ipimorpha subtusa (The Olive). A poplar-feeding species with recent records from Armagh and Antrim. Protect known sites.

Lacanobia contigua (Beautiful Brocade). A heathland species with few records. Determine status and protect sites.

Noctua interjecta (Least Yellow Underwing). A coastal species only recently recorded from one locality in Down. Maintain existing population and survey other suitable habitat.

Ochrolepura praecox (Portland Moth). A duneland species recorded from Co. Londonderry and south Down. Establish distribution and protect best known sites.

Odezia atrata (Chimney Sweeper). Occurs widely but very locally in NW especially in Co. Tyrone. Maintain all currently known populations.

Odontosia carmelita (Scarce Prominent). A birch-feeding species only known from south Fermanagh. Scarce throughout Ireland. Assess true status and maintain current population.

Parasemia plantaginis (Wood Tiger). A widespread but very local species of bogs, dunes and unimproved grassland. Possibly declining due to habitat changes. Maintain range and protect largest populations.

Pechipogon strigilata (Common Fan-foot). Rare throughout Ireland. Maintain any existing populations.

Perconia strigillaria (Grass Wave). Principally a bogland species with few recent records. Establish true status and protect best known sites.

Phytometra viridaria (Small Purple-barred). A widespread but very local species of bogs, dunes and unimproved grassland. Maintain range and monitor at selected sites.

Scopula floslactata (Cream Wave). Only recorded from 3 sites in Down. Determine true status.

Scopula immutata (Lesser Cream Wave). A fenland species confined to Brackagh Bog, Co. Armagh, and 4 other fens in central and south Co. Down. Maintain range, monitor and protect currently known sites.

Scopula marginepunctata (Mullein Wave). A coastal species only known from the coast of Antrim and Down, but no recent records. Determine true status and search old sites.

Sesia bembeciformis (Lunar Hornet Moth). Formerly regarded as common, but probably a greatly decreased species of marshes and bogs. Most recent records are from Fermanagh, Monitor and protect only currently known locality. Investigate old localities.

Synathedon muscaeformis (Thrift Clearwing). A coastal species only known from north Antrim. Monitor and protect existing populations and survey other suitable sites.

Tethea or (Poplar Lutestring). A woodland species with records from Fermanagh, Down and South Antrim; possibly overlooked. Search old sites. Monitor and protect at best known sites.

Trichiura crataegi (Pale Eggar). Confined to three woodland sites in west Fermanagh. Monitor population and protect all sites.

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