



The Dublin Naturalists' Field Club

# FEILEACHÁN 2010



Comma © F & M Walsh

## OVERVIEW

2010 was the best butterfly season for several years. Despite any anticipated reduction in numbers in the wake of an unusually cold winter and an initial delay in the emergence of very early species such as the Holly Blue, it soon became apparent that the emergence of many species was if anything earlier than previous years. Marsh Fritillary caterpillars were undeterred by winter flooding demonstrating again their capacity to survive inundation thanks to their web structure. Some caterpillars were observed sunning themselves days after a snowfall. This appears to have been an exceptional year for the adult MF which showed considerable mobility during the warm flight season. A substantial number of webs were found both in the spring and the late summer-autumn periods. Of course a many of the additional sites found were the result of careful reconnoitring and targeted recording in suitable habitat where the food plant Devil's-bit Scabious occurs in abundance. A notable increase in the number of Donegal sites is due mainly to the work of Bob Aldwell and Frank Smyth (see report below) but the species was reported, for example, from Co Wicklow (Christian Osthoff & Faith Wilson) for the first time in many years although it has since emerged that there has been more recent sightings at Blackditch. The origin of an adult seen somewhere along the N25 in Co Waterford has still to be determined.

Much to the database manager's relief, migrants were much scarcer than during the previous year. Until October there had been only a single report of a Clouded Yellow (Lesley Whiteside) but southerly winds in October resulted in one sighting in H7 (South Tipperary) and approximately 10 from Cape Clear Island. There was a smattering of Painted Lady from various parts of the country. The Red Admiral numbers were considerably down and there was little if any evidence of over-wintering survivors. There was a brief but immigration in October with several thousands reported from Cape Clear Island.

The Holly Blue had an excellent year, especially the second brood, which defied prognostications that the much reduced numbers in 2009 were due to parasitoids, rather than simply the inclement weather in mid-Summer which had also drastically curtailed the anticipated substantial Irish generation of the Painted Lady. Small Tortoiseshell did extremely well, with a plentiful first brood and large second brood in autumn. Large numbers of caterpillars were seen both in June and in September/October with reports of large masses of caterpillars and adult numbers frequently reaching the hundreds. A successful over-wintering occurred, despite record low winter temperatures, with reports of substantial numbers in March 2011. Peacock numbers have been quite small to date.

The Small Copper is another species that had quite a spectacular year. In most years sightings are usually small but in 2010 reported numbers were often in double digits. The Wall Brown was again seen in substantial numbers at known sites.

Reports from Donegal (Bob Aldwell) and from Dursey Island (Derek Scott) are included in this Newsletter and give an overview of the season in the most northerly and most southerly parts of the country.

## FIRST, LAST AND LARGEST NOS OF BUTTERFLIES REPORTED IN 2010

The table below is a summary of the earliest records, the latest records and the highest numbers of adults reported. It does not include caterpillars numbers which are usually estimates and in the case of Small Tortoiseshell estimates in 2010 have been up to several thousand in some instances. The information in the table has been derived from a number of sources. Please let us know if you spot any errors or have additional information not included here.

Species	1 <sup>st</sup> Rec.	Recorder	Last Rec.	Recorder	*MaxNo	Recorder
Essex Skipper	4/7	F Walsh; C Wilson H12	17/8	J Noonan H12	117	M Gray, R&F O'Driscoll H12
Dingy Skipper	2/5	J Harding H9	25/6	C Huxley H27	100	D Nash H30
Wood White	11/4	A Harding H9	7/8	D Nash H9	30	B Nelson H19
Clouded Yellow	24/7	L Whiteside H1	24/10	G Hunt H3	10	E O'Donnell H3
Brimstone	21/3	B Brewer; S McKenna H18	11/10	J Fogarty H7	32	J Harding H19
Large White	22/4	Frank Smyth H22	20/10	Power, Cahill, Sheridan H12	20	N Browne H12
Small White	7/4	J Harding H9	20/10	O Merne H21	100	F Walsh H12
GV White	7/4	D Cotton, J Dunleavy H28	24/10	D Scott H3	137	D Scott H3
OrangeTip	7/4	K Kelly H22	30/6	J Fox H34	50	D Coney H32
G Hairstreak	13/4	B Aldwell, F Smyth H34	30/6	B Aldwell H34	81	G & A Morrison
B Hairstreak	25/7	Ian Rippey H9	31/8	I Rippey H9	29	J Harding
P Hairstreak	14/7	C Osthoff H20	2/9	I Rippey H1	30	I Rippey H1
Small Copper	20/4	F&M Walsh H12	24/10	J Power H3?	67	J Harding H22
Small Blue	4/5	F & M Walsh H12	25/6	Bob Aldwell H35	127	J Lovatt H21
Common Blue	20/4	F&M Walsh H12	27/10	B Aldwell H35	348	J Harding H12
Holly Blue	9/4	A Phelan H21	6/10	B Aldwell H21	30	L Whiteside H11?
Red Admiral	1/3	C Wilson H12	26/11	J Wilson H5	2000+	E O'Donnell H3
Painted Lady	17/3	K O'Sullivan H21	24/10	D Scott H3	9	F&M Walsh
Small Tortoiseshell	17/1	J Shevlin, J Dowdall H12	24/11	J Wilson H5	1000	F&M Walsh H12
Peacock	17/4	F Smyth H35	27/10	B Aldwell H35	50	I Rippey H9
Comma	21/4	F Smyth H21	5/10	M Gray H12	3	C Wilson H12
PB Fritillary	3/5	D Hardiman H9	6/6	J Harding H9	30	A Mullen H9
DG Fritillary	2/6	R McCafferty H35	31/8	I Rippey H9	200	F&M Walsh H12
SW Fritillary	20/6	J Lynch	5/9	I Rippey H25	67	J Harding H15

		Gearagh H3?				
M Fritillary	16/5	D Hardiman, D Nash H9	28/6	B Aldwell H34	71	M Simms Carrickalahagh H35
Speckled Wood	6/4	Aubrey Fennell H13	20/10	F Smyth H21	300	J Lovatt H12
Wall Brown	17/4	David Cooke H3	16/10	David Cooke H3	40	D Scott et al H3
Grayling	18/6	D Hardiman, D Nash H25	26/9	M Gray H20	100	F&M Walsh H12
Gatekeeper	11/7	F Walsh H12	1/9	I Rippey H1	40	D Hardiman & D Nash H12
Meadow Brown	5/6	G Hunt H1	17/10	B Aldwell H35	377	Mary Foley H12
Ringlet	16/6	J Fogarty H7	31/8	M Fox H3	267	B O'Connor H12
Small Heath	15/5	B Aldwell H35	20/9	F&M Walsh H12	200	D Coney H32
Large Heath	3/6	F Smyth H35	1/8	L McCann H19	71	J Harding H18

H1 South Kerry	H21 Dublin
H2 North Kerry	H22 Meath
H3 West Cork	H23 Westmeath
H4 Mid Cork	H24 Longford
H5 East Cork	H25 Roscommon
H6 Waterford	H26 East Mayo
H7 South Tipperary	H27 West Mayo
H8 Limerick	H28 Sligo
H9 Clare	H29 Leitrim
H10 North Tipperary	H30 Cavan
H11 Kilkenny	H31 Louth
H12 Wexford	H32 Monaghan
H13 Carlow	H33 Fermanagh
H14 Laois	H34 E Donegal
H15 SE Galway	H35 W Donegal
H16 East Galway	H36 Tyrone
H17 West Galway	H37 Armagh
H18 Offaly	H38 Down
H19 Kildare	H39 Antrim
H20 Wicklow	H40 Londonderry

**Vice Counties**

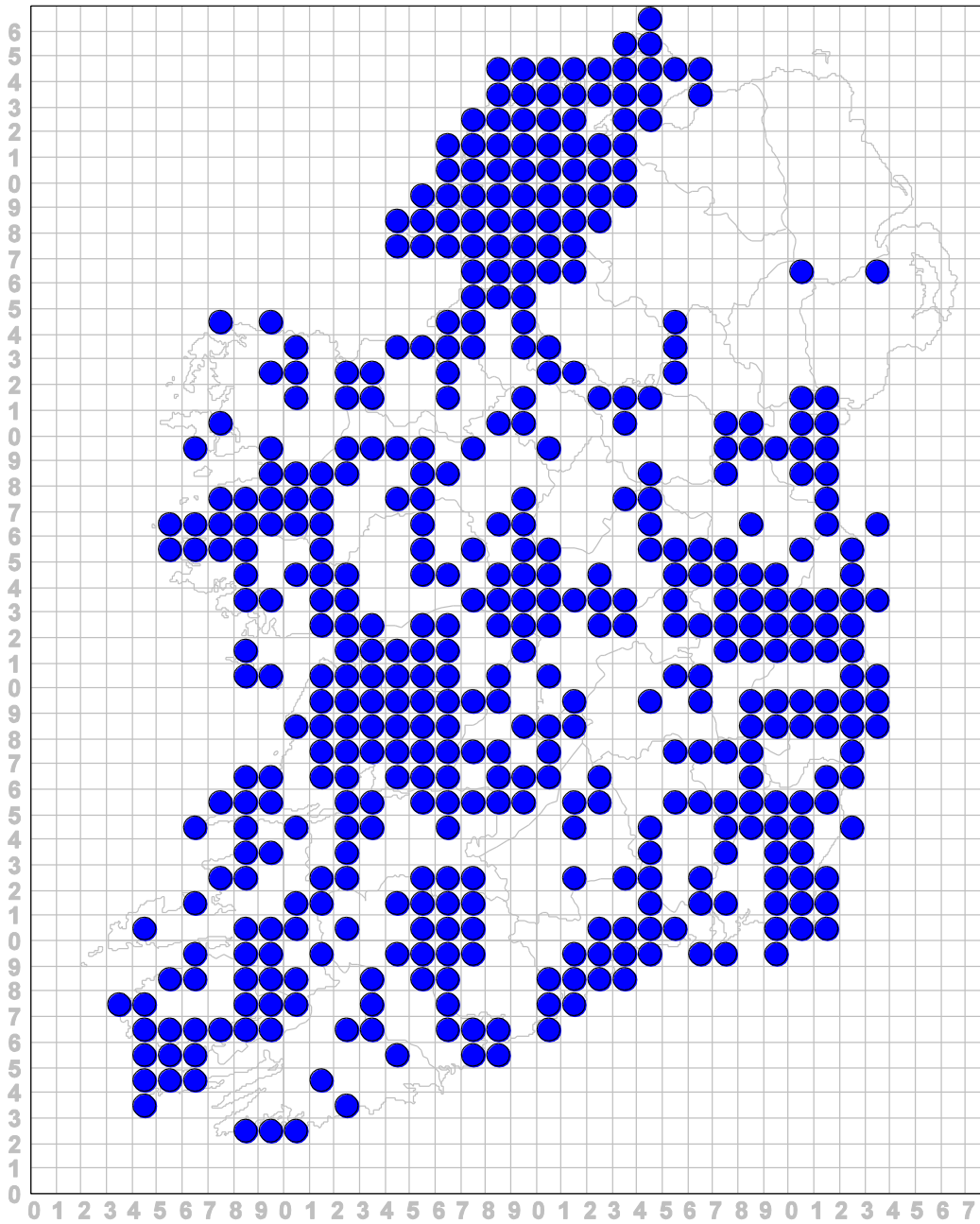
**DISTRIBUTIONS IN 2010**

The map below summarises the records received in 2010. To date records have been received for approximately 470 10 km squares and some are still awaited. Cavan and Monaghan continue to be among the less recorded areas but the coverage has been much improved for Mayo and part of Roscommon. The Essex Skipper appears to continue to spread and has been sighted in a new 10 km square in the Raven National Nature Reserve in Co Wexford and in some new locations.

The majority of reports of the Comma continue to be mainly from Co Wexford but there have been additional reports from Cos Wicklow, Carlow and Dublin. There have also been a number of early reports from Wexford in March 2011. Everything seems to point toward its establishment in Ireland and an ability to survive an exceptional cold winter in hibernation. It should be worthwhile looking carefully at every 'Small Tortoiseshell' seen. Nobody has yet reported any incidences of egg laying or larvae in Ireland.

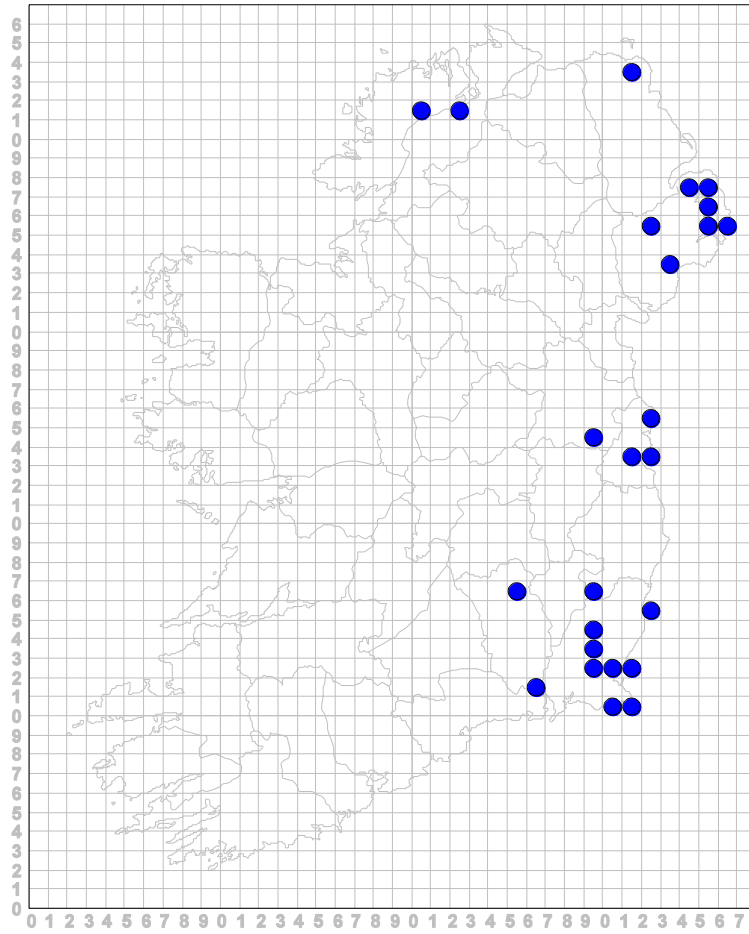
Updated distribution maps will be posted on ButterflyIreland in the near future.

# All Species

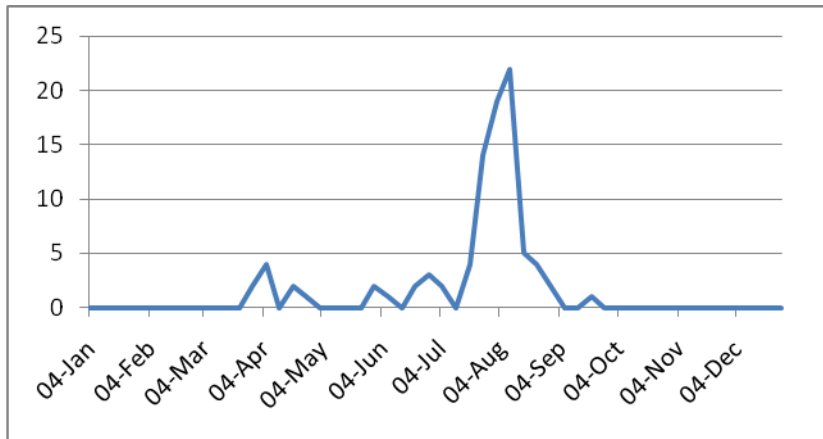


2010 (DMAP)

### Comma



Comma Records (DMAP) 2000+



Comma Time of Flight Chart

## DONEGAL REPORT

### Bob Aldwell, Coordinator Donegal Butterfly Survey

Despite the cold winter most resident butterflies had a good year. An exceptionally dry spring benefited the early species although it also led to widespread gorse and heath fires. After the 2009 boom year for migrants, 2010 was significantly below average with very few Painted Ladies and below average numbers of Red Admirals.

Persistent checking for species at a 10 km square level resulted in 52 new 10 km square records.

In 2009 in Donegal the Small Tortoiseshell appeared restricted to a single generation. By contrast in 2010 two generations were widespread with caterpillars in July and August even in inland areas at altitudes up to 250 m.

The Dark Green Fritillary had a good season and was recorded on three new 10 km squares, two of which were inland sites, well away from its more usual dune strongholds. The G99 site is hilly heath habitat and the G98 site is in woodland near Lough Eske. The C33 site is along a shore path with a mixture of Heath and scrubby woodland.

The Silver-washed Fritillary was discovered on four new 10 km squares, including the first confirmed record for Inishowen (C33).

The Small Blue was recorded on two new 10km squares, although within its previously known geographic range.

The Marsh Fritillary and Small Heath in Donegal are increasingly seen to be companion species and both were recorded on several new 10 km squares – 15 in the case of the Marsh Fritillary and seven for the Small Heath.

The new sites were mainly in wet heath. The strong Marsh Fritillary colony in east Fanad successfully survived the spring fires and lots of larval webs were present there in the autumn, even on the burnt skeletal remains of the heather.

The Small Copper was recorded on five new 10km squares.

Efforts were made to obtain records from several of the larger offshore islands.

Two visits to Tory in early and late June confirmed the Common Blue and Small Tortoiseshell as the most numerous butterflies there. Other species seen were the Grayling, Green-veined White, Large White, Meadow Brown and Small White. On June 3<sup>rd</sup> a single Painted Lady was seen on the east side of Tory and two caterpillars on the west side of the island. Red Admiral larvae were also noted.

Visits to Inishtrahull in June and August recorded two Red Admirals, and a single Green-veined White, Peacock and Small Tortoiseshell. Orange Tip eggs were also seen on Cuckoo Plant.

Other new island records were Aranmore –Green Hairstreak; Inishfree Upper – Common Blue, Large White, Marsh Fritillary, Small Copper, Small Heath and Speckled Wood; Inishsirr -Marsh Fritillary and Small Heath.

The contribution of the members of the Donegal Butterfly Recorders' Network is gratefully acknowledged.

END

## BUTTERFLIES ON DURSEY ISLAND, CO. CORK, IN 2010

**Derek A. Scott**

**Observers:** David Cooke, Brendan Finch, Kieran Finch, Kieran Grace, Tony Lancaster, Derek Scott and Joanna Scott.

**Coverage:** With a total of only 203 days with observers active on the island, coverage in 2010 was the worst since 2003 and way below the best (302 days) achieved in 2005.

2010 was very poor for immigrant butterflies, producing only four small influxes of Red Admirals in the autumn and no more than about 17 Painted Ladies all year. However, a few Clouded Yellows appeared with the last influx of Red Admirals in mid-October. On the other hand, most resident butterflies appear to have done well. A small colony of Large Whites was established in Tilickafinna; Green Hairstreak, Small Copper and Grayling did particularly well, and Speckled Woods were recorded on the island for the first time. There were no very early butterflies, the first of the season being four Painted Ladies on 20 March, and there were no unusually later records (although there was a gap in coverage from 25 October to 4 November).

### Small White

One in Scott's garden in Tilickafinna (V4639) on 30 and 31 August and 1 September (DS).

### Clouded Yellow

There was a small influx during a period of light south-easterly winds in mid-October: four were recorded on 11th (KG, AL), seven on 12th (KG, AL), one on 16th (KF), and one on 18th (KG, AL).

### Green Hairstreak

Despite extensive burning in the early part of the year, 2010 seems to have been a very good year for this species. Five on 16 May were the first of the year. Thereafter, recorded on many dates between 23 May and 4 July, with high counts of 35 on 4 June, 35 on 6 June, and 72 on 12 June.

### Small Copper

2010 was a very good year for this species, with records on 20 days (compared with only four days in 2009). The first were single individuals in Scott's garden in Tilickafinna on 14 May .... The last of the year was one in Kilmichael on 29 September.

### Red Admiral

2010 was a rather poor year for this immigrant, with the only significant influxes occurring on 15 August, 26 August, 20 September and 10/11 October.

### Painted Lady

2010 was a very poor year for this species on Dursey, with only about 17 individuals being recorded. The first of the season were four in Kilmichael and on the High Cliffs on 20 March (DC). .... The easterly winds in September produced only a handful of individuals: singletons on 6th, 8th, 17th, 19th, 25th and 28th scattered around the island

### Peacock

2010 was yet another poor year for this species on Dursey, with no more than five being recorded in a day, and most records coming from Scott's garden in Tilickafinna All records were in the first three weeks of August.

### Speckled Wood

A fresh individual, probably a male, was found in Scott's garden in Tilickafinna (V4639) on 1 June (JS) and seen again in the same area on 2 and 4 June (DS, JS). Another individual, probably a female, was seen near the old pump in Kilmichael village (V4840) on 6 June (DC). Yet another was seen in Kilmichael village on 28 August (DC, BF), and finally a very worn individual was seen in Scott's garden on 1 September (DS). These were the first records on Dursey Island of this common and widespread species.

### Wall Brown

The first of the season were four on 17 April (DC), but the next were not until four on 2 May. Thereafter fairly common until early June, with high counts of 20 on 15 May, 21 on 23 May and 16 on 4 June. Two on 13 June and one on 15 June were the last of the first brood. The first of the second brood was one on 2 August. Numbers then increased rapidly to 22 on 7 August and 25 on 8th. Thereafter common until early September, with high counts of 40 on 14 and 22 August. ....

### Grayling

2010 was a good year for this species on Dursey. The first of the season were one near the Tip on 20 June and two on the High Cliffs on 27 June (BF). Then fairly common throughout July, August and early September, with high counts of 21 on 4 July, 32 on 7 August, 22 on 8 August, 24 on 13 August, 26 on 15 August and 12 on 4 September. Singletons were recorded on four dates between 5 and 12 September, and the last of the season was seen in Tilickafinna on 18 September.

[This is an abbreviated report] END

## IN TRANSITION

It is with great sadness that we report the death of **Trevor Boyd** (1931-2010) in December. Trevor was well known in entomological circles especially in his role as Butterfly Recorder for Northern Ireland. For many years he collated butterfly records for Northern Ireland and entered all the data into Butterfly Conservation's database, as well as producing regular newsletters for BCNI members. He was Secretary of the Belfast Naturalists' Field Club for several decades. One of his other interests was meteorology and he had an official met office weather station at his home at St Helen's Bay, Bangor. He received an honour for his contributions to meteorology. Trevor had become ill in the middle of last year but had made a remarkable, but unfortunately temporary, recovery, due to his extraordinary determination and success in carrying on life as normal.

Our deepest sympathy to his wife Heather, daughter, sons and grandchildren.

**Maurice Hughes** has retired as Regional Officer for Butterfly Conservation (Northern Ireland) and we are told now has a mobile moth trap disguised as a camper van! He has been replaced by **Catherine Bertrand**. **Brian Nelson** has moved from the National Museums of Ulster to the NPWS on his appointment as Invertebrate Ecologist.

END

## RED DATA LIST

A significant development in 2010 was the publication of an all Ireland Red Data List No.4 for butterflies. Separate assessments have been made for the Wall Brown and Small Blue in Northern Ireland where these two species are believed to be respectively under serious threat or probably extinct. The fact that a particular butterfly species is considered to be under threat on the Ireland Red List does not imply that the species has any statutory protection. To date even the Marsh Fritillary is not protected by a statutory order. It seems unlikely, given the lack of success in protection vascular plants, that the Red List for Butterflies will have any greater success. But we shall wait "with interest". You may well have your own views on the validity of the List but be prepared for the review which is to take place between 5 and 10 years hence! No Irish butterfly species is listed as threatened on the IUCN Global Red List ([www.iucnredlist.org](http://www.iucnredlist.org)) for Europe, but one species is "threatened" on the European Red List: Large Heath *Coenonympha tullia* (Vulnerable, A2c; van Swaay et al., 2010). The Marsh Fritillary *Euphydryas aurinia* is listed in Annex II of the European Union Habitats Directive."

The full Ireland Red List document may be downloaded from either of the following addresses:  
[www.butterflyireland.com/News&Comments.htm](http://www.butterflyireland.com/News&Comments.htm)  
[www.npws.ie/en/media/NPWS/Publications/Redlists/RL4.pdf](http://www.npws.ie/en/media/NPWS/Publications/Redlists/RL4.pdf)

END

## SUBMISSION OF RECORDS

Any outstanding records for 2010 (and previous years) will be most welcome as soon as you have the opportunity to send them in. It is intended to make live a revised recording module on Butterfly Ireland in the near future. This is designed to speed up the entry of records into our database and thus to reduce the time spent in administration. It will also make it easier to report the numbers of eggs and larva seen. When you go online for the *first time* you will be requested to enter a user name, your email address and a simple password. You will also be asked for your name and contact detail in case we need to verify a record etc. Thereafter, if you save your details on your computer you can logon without any delay. No personal information will be passed on to third parties without your express permission. Grid references will be published in order to protect recorders against any type of litigation that conceivably might arise in relation to sensitive data. But you are requested, for mapping purposes, to supply a Grid Reference (obtained from OS Maps, GPS or using the online link. There may be a hiatus in the change over, so please bear with us during any temporary interruptions. The format of published sighting will be unaltered.

The DNFC, contrary to what you may believe, is not in receipt of transect data for 2010 from the NBDC. So all data is welcome.

We understand that the NPWS is now fully committed to reporting on the status of the Marsh Fritillary in Ireland, as an Annex II Species, in 2012, despite financial constraints in the public service. We are not aware whether or not funding will be made available to recorders by the NPWS for this purpose. The DNFC was approached by the NPWS in August 2010 and requested to hand over all Recorders' Marsh Fritillary data. It decided that it was not then in a position to assist. But it sought reassurances in relation to the Freedom of Information Act and the legislation relating to the release of information on the environment, to inform its decision making. One of the issues raised was the matter of the indemnification of Recorders (and The DNFC) who might be left open to legal proceeding by a landowner who might feel aggrieved in not being allowed to "develop" a Marsh Fritillary site in his/her ownership. Another matter was the question of commercial exploitation of data that had been provided *gratis* by Recorders – would the data be handed over to third parties? The DNFC still awaits a response from the NPWS on these issues. However, the DNFC has recently received a letter from the NPWS withdrawing its request for the data. The latter action should not be represented as a refusal by the DNFC to supply data to the State which is under considerable pressure from the EU for previous failures to comply with Directives. If there are any significant developments in this matter then you, as a Marsh Fritillary Recorder, will be informed. You will find a copy of the DNFC's policy document in relation to data held on its websites [dnfc.net](http://dnfc.net) and [butterflyireland.com](http://butterflyireland.com) .

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### URBAN BIODIVERSITY CREATING HABITATS FOR BUTTERFLIES IN TIPPERARY TOWN

**Albert Nolan**

Urban biodiversity, the study of wildlife in our towns and cities fascinates me. Unlike many people who head to the countryside when they are looking for wildlife I love to explore towns. They are not as intensely managed as our countryside and in many cases support a diverse range of habitats and wildlife. River banks retain their trees and vegetation, remains of field hedgerows are visible within housing estates, and wildflowers for butterflies find quite corners to flourish. Also if your day seems to disappear like the morning mists, butterflies can be quite concentrated, compared to the open countryside. For example a single Buddleia bush can often have five or more species on it and unlike bats or wasps local, residents love butterflies and are happy to share their gardens and parks with them.

Resources have become very scarce and the creation of new butterfly habitats, although vitally important can be expensive. A different approach is to try and protect and enhance what we already have in our towns. For example Tipperary town is still rich in wildlife habitats and by participating in the tidy towns committee we have been able to select a cross section of them for more sensitive management. This can be a very beneficial process and helps to raise awareness around the importance of protecting butterflies. Also in a climate of economic hardship the cost of projects is minimal in terms of labour and materials. Mostly all that needs to be done is to remove any litter, erect information signs and keep any exuberant growth in check. Nature in this instance is the ideal recessionary companion.

The one drawback to this is that some of the habitats are frequented by more than just butterflies. While we all like to try and educate the public about our passion for butterfly watching, for me four burly intoxicated men do not fall into that category. But as the old saying goes, once bitten twice shy and now before I visit these areas I give a quick peep. If the butterflies are keeping unsavoury company I leave it for another day.

One of the best urban habitats in town is a derelict site beside an abandoned car park. The flower beds have been left to grow naturally and along with the surrounding walls have been colonized by Valerian. Also there is a small piece of ground measuring roughly 20 feet by 20. Initially it was covered in rubble but has now developed into a rich wildlife habitat. So far we have recorded Small Tortoiseshell, Painted Lady, Red Admiral, Peacock, Speckled Wood, Common Blue and Large White.

Another positive development is the decision by the local authority not to use chemicals to control weeds and that flower beds will be sown with plants that are beneficial for butterflies. These simple measures took years of persistence and three different town engineers before being agreed and need constant vigilance to ensure proper implementation.

Effecting positive change in the wider countryside for wildlife can be a slow and torturous process. Often it involves complex European legislation, which then has to be adopted by the Irish government and finally implemented by farmers. Part of this involves public consultation and after many hours spent sending in submissions I feel that this is best left to better resourced organizations. But in our towns and villages we have a golden opportunity to act locally by identifying habitats and getting them included in the tidy town plan. Wildlife and Natural amenities are worth 50 precious points and this is the great selling point when trying to encourage local authorities and residents to conserve butterflies. Adaptability is vital for the long term survival of any species and in the forgotten corners of our towns countryside butterflies are finding the pace of life to their liking.

END

### **Butterfly camp in Europe's best *Maculinea* Country (Hungary)**

This year, for the first time ever, the Hungarian Natural Heritage Trust organizes an international event on butterfly and moth conservation from the 21st -26th of May in the Órseg National Park in Western Hungary. The National Park has a unique butterfly fauna and harbours over a 100 butterfly species, including all European species of the worldwide famous Large Blues (*Maculinea*).

For further information please look at [www.butterflyireland.com/News&Comments.htm](http://www.butterflyireland.com/News&Comments.htm)

## RECENT PUBLICATIONS

### **2010 Atlas of Butterflies in Britain and Ireland**

Richard Fox & Jim Asher. Butterfly Conservation Report No. S10-20, Wareham.

This report presents up-to-date distribution maps for all butterfly species (except for Large Blue) that breed annually in Britain and Ireland. The maps are drawn from the Butterflies for the New Millennium (BNM) project, the national recording scheme for the UK, Republic of Ireland, Isle of Man and Channel Islands, run by Butterfly Conservation and the Dublin Naturalists' Field Club, in association with the Centre for Ecology and Hydrology.

No analysis is presented. However, the maps show the current 2005-09 records against the situation in 1995-1999. Thus some indication of losses and gains over the past decade is immediately apparent. Maps showing the expanding distribution of species (the Holly Blue is the only species that has obviously expanded its range in Ireland).

### **The Butterflies of Britain and Ireland**

Jeremy Thomas & Richard Lewington. British Wildlife Publishing. Hardback pp 287.  
ISBN 978-0-9564902-0-9. RRP sterling £24.95.

This is an excellent update of the 1<sup>st</sup> edition which was published in 1991 and has been long out of print. Jeremy Thomas is Britain's leading butterfly ecologist, well known for his ground breaking work on the association between ants and 'blues'. Richard Lewington is the premier butterfly artist and his illustrations have appeared in many butterfly books in recent decades. The book has accounts for all species to be found in Britain and Ireland including rare migrants/vagrants such as the Monarch, the Pale and Clouded Yellows and the more recent horticultural Geranium Bronze. All four stages of each species are illustrated together with indicative distribution maps and life cycle temporal charts. Much interesting ecological information derived from first hand observation or from other experts is included. This publication is highly recommended.

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### **The Butterfly Isles A summer in search of our Emperors and Admirals,**

Patrick Barkham Granta, London (2010). Hardback pp 372  
ISBN 978 1 84708 127 8 . RRP sterling £20.00 (available at reduced price from some sources.)

This book is a highly acclaimed account of Patrick Barkham's frenetic twitching expeditions to see 59 adult butterflies in Britain and Ireland in one season. It includes details of each site visit and is interdispersed with comments, anecdotes and sometimes rather humorous comments on his many guides who helped him to achieve his objective. He also conveys interesting information about each species. So this book has something for all readers regardless of expertise. Barkham's trip to Ireland brought him to the Lough Neagh area to see Réal's Wood White, where he was escorted by Maurice Hughes and Trevor Boyd. He also visited Murlough Reserve, Co Down, an excellent butterfly site which contains Marsh Fritillary.

## Nabokov's Theory on Butterfly Evolution Is Vindicated



Vladimir Nabokov is best known as a writer but he also was an excellent lepidopterist who studied butterflies. Nabokov inherited his passion for butterflies from his parents. When his father was imprisoned by the Russian authorities for his political activities, the 8-year-old Vladimir brought a butterfly to his cell as a gift. As a teenager, Nabokov went on butterfly-hunting expeditions and carefully described the specimens he caught, imitating the scientific journals he read in his spare time. Had it not been for the Russian Revolution, which forced his family into exile in 1919, Nabokov said that he might have become a full-time lepidopterist.

Nabokov fled Russia to Switzerland and his skills as an amateur butterfly enthusiast eventually got him a job in the US at what became the Harvard Museum of Natural History. There he organized its butterfly collection. He specialized in the Polyommata, the blues, coppers and hairstreaks: one group of them - *Nabokovia* - is named in his honour.

The Polyommata have long frustrated taxonomists. New theories were being proposed as recently as 1995, with no firm conclusions reached. In Nabokov's day the taxonomists had only anatomy - not DNA evidence - to go on. What best distinguishes butterfly species anatomically, apparently, is the complex male genitalia. Nabokov stared at these, say museum staff, "under a microscope six hours a day, seven days a week, until his eyesight was permanently impaired." The museum still has his cabinet.

As museum curator he collected the insects across the United States and elsewhere. He published detailed descriptions of hundreds of species. In 1945 he proposed that New World blues fell into five major groups which successively crossed what is now the Bering Strait from Asia. The group that is now southernmost crossed first; the more northerly crossed more recently. "A rather drastic rearrangement of the species and groups was an inevitable consequence of this investigation," he wrote. In the obscure but intense world of butterfly taxonomy, this was radical stuff.

Now Museum scientists have done the first major analysis of Polyommata DNA, and report, in the *Proceedings of the Royal Society B*, that Nabokov was right.

The insects indeed divide into those groups, which reached the Americas just as he said. The temperature tolerances of the different species even match the temperatures that would have been

present around the Bering Sea, or land bridge, whichever it was, when each group crossed it to reach North America. The researchers call Nabokov's ideas "uncannily correct".

Yet according to the late evolutionary biologist Stephen J. Gould, Nabokov never accepted that DNA would ever replace anatomy for tracing taxonomy. If Nabokov were alive today he might note that DNA has now confirmed his work, not the other way around.

Maybe not: apparently there was a lot of butterfly science in *Lolita*. But beyond that, Nabokov himself told interviewers that the word "reality" should always be in quotes, as different observers see different things.

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<sup>i</sup> This article is a composite drawn from the New Scientist and elsewhere