



**Butterfly
Conservation**

Saving butterflies, moths and our environment

Butterfly Conservation exists to save wild butterflies, moths and our environment. It is a UK-wide society, with 31 branches and over 16,000 members. The headquarters of Butterfly Conservation are based in Dorset. The national society has an excellent web site at www.butterfly-conservation.org

The Dorset Branch of Butterfly Conservation is a very active branch, with over 600 members. It carries out lots of advisory and conservation work, as well as an impressive programme of walks and talks. New members are always welcome.

See www.dorsetbutterflies.com for more information about the Branch and its activities, or contact Jane Smith (see previous page).

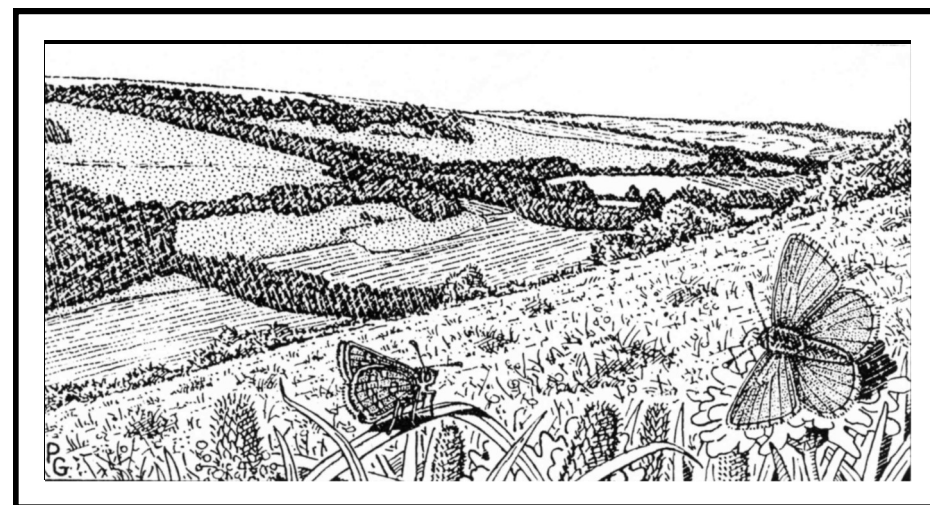


This booklet is printed on recycled paper. Further copies are available from Lyn Pullen (see previous page). Copies are free to Dorset Butterfly Conservation members or to those interested in taking up butterfly walking in Dorset. Anybody else is asked to send five second class stamps to cover the cost of production and postage.

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Counting Dorset's Butterflies and Moths

£1.00



**Silver-spotted Skipper and Adonis Blue
at Fontmell Down by Paul Green**

*All you need to know about recording
butterflies and moths in Dorset.
Seventh Edition 2013*





Introduction

This booklet is about why we need to record butterflies and moths, and how to become involved in Dorset. It doesn't matter where you live, how old you are or how much you know about butterflies, you CAN help.

Dorset is lucky – it has a wide variety of habitats and a coastline which gives it a large number of butterfly and moth species. It is also fortunate in having a very active branch of Butterfly Conservation which co-ordinates the recording and use of the data captured.

We have written the text to act as both an introduction to people new to butterfly recording, and to be a quick reference guide for more experienced walkers.

Happy Walking!

Bill Shreeves & Lyn Pullen

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Where to send Moth Records

All hard copy records should be sent to the Dorset Environmental Records Centre.

National Moth Recording Scheme

Butterfly Conservation nationally has received Heritage Lottery funding to start recording moths nationally. Your records will feed into the national scheme.

National Moth Night

Every year there is a “National Moth Night” organised by Atropos Magazine and Butterfly Conservation. The date varies each year to enable different species to be targeted. Moth events are held all over the country and people are asked to

make a special effort to record moths and send in their records. See the Dorset Branch list of events (free to members or available on the branch website) for local events. See also www.nationalmothnight.info.

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Dorset Environmental Records

Why record?

Counting butterflies and moths is important. Many species are reducing rapidly in number – five species of butterfly and sixty moths have become extinct in the UK over the last century – and if we are to reverse this decline, we need to understand why this has happened.

To monitor the progress of a species you have to record its numbers over the years, and to link this data with other information such as climate and land management. This, hopefully, leads to being able to deduce why a species is reducing in numbers. This in turn enables us to try to alter the way in which its habitat is managed, to aid the species’ recovery.

It is obvious that this monitoring and the subsequent work need to be carried out on a national rather than a local scale to be truly effective. In 1992, the Government signed up to the Biodiversity Treaty at the Rio de Janeiro Summit. This led to its commitment to give wildlife conservation a

higher priority, a commitment to which many wildlife organisations, including Butterfly Conservation, were quick to react. The result has been a series of Species Action Plans and Habitat Action Plans (leading to Regional Action Plans!) which have defined the species under particular threat, what can be done to help them, and the cost of the necessary action. This, for the first time, gives us targets against which to judge our – and the Government’s – success.

But who can do all this monitoring? The answer is that a lot of it is done by amateurs who volunteer their time. Entomology is one of the areas of science where it is still possible for the amateur to be heavily involved and to make a real contribution to scientific knowledge. Look at the “Millennium Atlas of Butterflies in Britain and Ireland” (see page 5): the vast majority of the huge quantity of data used in this very important work was recorded by volunteers. In addition, it is data collected by amateurs which has made it possible for professional researchers to

provide sound evidence for the approach of global warming via earlier emergence of many common species and their spread northwards.

There are various ways in which the recording can be organised, and the methods used in Dorset are the subject of this booklet. Each has its own purpose and suits different people, from the very involved recorder to the person willing to jot down what they see on their way to the shops. Monitoring butterflies need not be an onerous task – they only come out on sunny days in the summer! Moths are

rather different, but have a fascination all of their own, with a beauty both in their appearance and their names—see page 36.

Have a look through the booklet, decide which method of monitoring suits you and give it a go—you'll soon be hooked!

Walking Etiquette and Health and Safety

Whatever method of recording you use please :

- Do not trespass. Walking needs to be done along roads or footpaths/bridleways unless you have permission from the landowner
- Shut all gates behind you
- Keep dogs under control
- Do not light fires
- Park your car where it is not going to cause any problems and it is not on private property
- Wear stout footwear unless you are going to be on a road or well-surfaced path all the time
- Let someone know where you are going
- On hot days, take something to drink with you and wear a hat

Method Six: Wider Countryside Recording

This is a national survey which aims to reach “ordinary” parts of the countryside not covered by transect walks. This is intended to give a more accurate picture as to how butterflies are doing generally, as the transect walks tend to exist to record the rarer species or special habitats.

It was started in 2009 and is organised by Butterfly Conservation nationally in partnership with the Centre for Ecology and Hydrology and the British Trust for Ornithology.

Dorset, along with all the other UK counties, is randomly allocated some areas within its boundaries, defined by kilometre squares. Volunteers make a minimum of two visits to their square in July and August, with an option of two extra visits in May and June. Using standard Transect Walk procedure (see Method Five) you count the

butterflies along two roughly parallel one-kilometre survey lines, each of which is divided into 200 metre sections. Most of Dorset's squares have had the routes of their walks set. There is an option to also count other selected insects at the end of the walk.

In 2009 nationally over 760 places were surveyed and 116,000 butterflies of 49 species were counted. The Dorset contribution was 32 places with 6,994 butterflies of 31 species.

Anybody interested should get in touch with Adrian Neil, the Dorset Champion for the Wider Countryside Butterfly Survey (see contacts list inside back cover).

List of Transect Walks in Dorset

Alners Gorse, ST73/10, North
Avon North, SU 12/03, East
Avon South, SU 12/03, East
Badbury Rings, ST 96/03, East
Ballard Down, SZ 02/80, South
Bindon Hill, SY 82/80, South
Brackett's Coppice, ST 51/07, West
Cashmoor, ST98/13, North
Cerne Black Hill, ST 66/00, West
Cerne Giant Hill, ST 66/01, West
Chard Junction, ST 34/04, West.
Clubmen's Down, ST88/18, North
Corfe Castle Mound, SY 95/82, South
Corfe Common, SY 95/81, South
Corfe, West Hill, SY 95/82, South
Deadmoor Common, ST 75/10, North
Duncliffe Wood, ST81/22, North
Durlston (East), SZ 03/77, South
Durlston (West), SZ 02/77, South
Ferry Road West SZ 02/84, South
Fifehead Wood, ST 77/21, North
Fontmell Down, ST 88/17, North
Garston Wood, SU 00/19, East
Girdler's Coppice, ST 79/13, North
Hengistbury Head, SZ 17/90, East
Hethfelton Wood, SY 85/87, South
Hod Hill, ST 81/10, North
Hog Cliff, SY 62/96, West
Iford Landfill, SZ 13/93, East
Jerry's Hole, ST81/16, North
Kingcombe Pound, SY 55/99, West
Kingcombe Redholm, SY 55/98, West
Kingcombe Stones, SY54/98, West
Kinson Common, SZ 06/96, East
Langton Westwood, SY 99/79, South
Lankham Bottom, ST 60/00, West
Lorton Meadows, SY 67/82, West
Lulworth Lake, SY 86/83, South
Lydlinch Common, ST 73/13, North
Melbury Down & Wood, ST90/19, North
Milldown, ST88/07, North
Moors Valley Country Park, SU10/05, East
Mude Valley, SZ 18/93, East
Pamphill, ST99/00, East
Piddle's Wood, ST 79/12, North
Portland, Broadcroft, SY 69/72, West
Portland, Perryfields, SY 69/71, West
Portland, Tout, SY 68/72, West
Powerstock Bridleway, SY54/97, West
Powerstock North, SY 54/97, West
Powerstock Poorwood, SY 53/97, West
Powerstock Rail, SY54/97, West
Radipole, SY 67/79, West
Redhill, SZ 08/95, East
Sopley Common, SZ 12/97, East
Sovell Down, ST99/11, North
Stanpit, SZ 16/92, East
Stour Valley, SZ08/96, East
Stubhampton Bottom, ST89/16, North
Studland, SZ 02/83, South
Tadnoll, SY 79/87, South
Townsend Quarry, SZ 02/78, South
Upton North, SY 98/95, East
Upton South, SY 98/94, East
Wareham Walls, SY 92/87, South
West Moors, SU 08/04, East
Wimborne St Giles, SU 04/11, East
Winspit Valley, SY97/76, South

Learning to identify and record butterflies

There are only some 60 butterfly species in the British Isles, so the task of learning them is not too lengthy. Identifying all of the 2,500 moths – especially the small micro-moths – is only possible for a few real experts, but there are many which are easy to identify and surprisingly beautiful when you take the trouble to seek them out.

There are several possible approaches to learning about butterflies: you can read books, look at a DVD, attend lectures or go out into the field with more experienced butterfly-watchers. Your best bet is probably to do all four, suiting the method to the season.

Books - Butterflies

Lewington, Richard. **“Pocket guide to the butterflies of Great Britain and Ireland”**. British Wildlife Publishing. 2003. Field guide with the butterflies illustrated life size in both natural and “set” (wings spread) positions. Also shows other stages in the life cycle and some day-flying

moths.

Newland, Tomlinson & Still. **“Britain’s butterflies”**. WildGuides2010 (2nd ed). Field guide with multiple photos of each species as adults, caterpillars, pupae and eggs.

Asher, Jim, et al. **“The millennium atlas of butterflies in Britain and Ireland”**. Oxford University Press, 2001. Not an identification guide, but a superb book about butterflies in the late 20th century, which uses the recording work of hundreds of volunteers throughout the British Isles.

Thomas, Jeremy & Lewington, Richard. **“The Butterflies of Britain and Ireland”**, British Wildlife publishing. 2010 (new edition). Not a book you can carry with you in the field, but excellent text and illustrations which show the male and female butterflies as well as the other life stages.

Thomas, Jeremy. **“Philip’s Guide to Butterflies of Britain and Ireland”**. Philips.

2007. Excellent guide which replaces his earlier Hamlyn publication. Covers each species separately but also gives side-by-side pictures to aid identification of similar species.

Books—Moths

Waring, Paul & Townsend, Martin. “**Field Guide to the moths of Great Britain and Ireland**”. British Wildlife. 2009 (Rev ed). Illustrated by Richard Lewington. Shows the moths in their natural resting positions rather than in the traditional “set” (wings spread) position. There is also a reduced version: “**Concise Guide to the moths of Great Britain and Ireland**”. British Wildlife. 2007.

Sterling, Parsons and Lewington. “**Field Guide to the Micro-moths of Great Britain and Ireland**”. British Wildlife Publishing 2012.

Books: Butterflies and Moths

Manley, Chris. “**British Moths and Butterflies: a Photographic Guide**”. Mainly photos, with limited text, but includes some caterpillar/pupa/egg shots.

Books—Caterpillars

Porter, Jim. “**Colour identification guide to the caterpillars of the British Isles**”. Viking, 1997. Many of the caterpillars you will find in your garden are those of moths rather than butterflies, and may alert you to species of moth you would not see as adults. Covers 850 species.

Carter, David. “**Caterpillars of Britain and Europe**”, HarperCollins (Collins Field Guide series), 1994. Cheaper than the book by Porter, but having European species shown can be very confusing.

Tim Crafer. “**Foodplant List for the Caterpillars of Britain’s Butterflies and Larger Moths**”. As the title suggests, this is just a list, but starting with the foodplant is often your best way of identifying the caterpillar.

Web sites

The Dorset Branch of Butterfly Conservation has a website at www.dorsetbutterflies.com. This gives information on the various species of butterfly and where they can be found in Dorset, as well as showing recent sightings and listing

stances, usually including treacle and beer or wine. These are then suspended somewhere where moths are likely to be found, and the moths will land on them, allowing you to identify them by torchlight.

There are also pheromone lures for some species, which mimic the sex attractant chemicals given off by the females to attract the males. A female Emperor Moth will assemble a group of males from up to two miles away!

If you do not wish to use any of the above techniques you can just watch for moths which are attracted to your outside light, or go round your garden with a torch. You can help attract moths into your garden by growing the right plants, such as nicotiana (tobacco plant), honeysuckle, ivy and privet.

Why Records are needed

Work has been carried out by Butterfly Conservation (published as the South Central Regional Action Plan for Dorset, Hants & Wiltshire) which identified rare or threatened moth species in Dorset and prepared plans for their conservation, categorising them as high or medium priority.

Probably 23 high priority & 71 medium priority species of moth still survive in Dorset, but national research has shown that even species once common have become rarer over recent years. If the rich biodiversity of moth species and habitats is to be conserved in Dorset, records for all species are urgently needed.

How to record

If you record day flying moths when doing Transect Walking, your sightings should be listed on the back of your transect record sheet and sent in to your walk co-ordinator. He/she will add them to special day flying moth record sheets & send them into the Dorset Environmental Records Centre.

If you are a casual moth observer and normally only record a few species, there are record cards for single species which can be obtained from DERC.

If you run a light trap and encounter large numbers of species you will need either electronic or hard copies of the full or partial moths species list. These can be obtained from Les Hill (see below). Alternatively, you can report your records electronically via www.dorsetmothgroup.org.uk.

Recording moths

We are less aware of moths than butterflies because many of them only come out at night, but in fact there are many more moth species than butterflies in this country. Moths are divided into macro moths (the bigger ones) and micro moths (the smaller ones), and there are some 2,500 species, compared to about 60 butterflies. Some of them have fascinating names: the Rosy Footman, the Powdered Quaker and the Obscure Wainscot to pick but a few. Whilst there are a number which are mainly brown in colour, there are many of great beauty: the Peach Blossom, the Scarlet Tiger and the Convulvulus Hawk-moth, for example. We tend to know less about moths than butterflies because they have been less studied, so this is even more an area where the amateur can make a significant contribution. So whether you prefer to record just the ones that you happen to see, or make an effort to seek them out, you can help by recording your observations.

How to find moths

If you want to watch butterflies you can find a likely area of

habitat on a day with good weather and expect to see several species. Because most moths are night-flying, if you want to see a reasonable number—and identify them—you need to lure them to you.

The main way in which this is done is using a moth-trap (also referred to as a light trap or sometimes a Robinson trap). This uses a bright light to attract moths, which will often then go down to the bottom of the light, which will have been surrounded by egg trays. These egg trays form an ideal hiding place for the moths, who will stay there until you pick up the boxes and examine your findings. This can be done during the evening/night or left until the next morning. The moths are then released unharmed. Traps can be powered by electricity, a petrol generator or some even by a car battery. Different bulbs in the light will attract more or less species.

Sugaring and wine roping are other techniques, especially for those species who do not come readily to light. Either boards or lengths of rope are painted or soaked in a mixture of sub-

the dates of the first sightings of species for the year. You can input your butterfly sightings via a map-based form, or download forms to complete and send in later. It also lists the extensive programme of butterfly walks and talks which are run every year.

The website of Butterfly Conservation, the national society, is at www.butterfly-conservation.org. This has a good section on different butterfly and moth species as well as lots of information about the society and the ways you can help butterflies.

www.dorsetmothgroup.info is a great resource for moth information, including sightings. We ask you to report moth sightings to this site, rather than the Dorset Branch website - we work together, so there is no point in overlapping our work.

Lectures and walks

The Dorset Branch of Butterfly Conservation arranges an excellent series of indoor and outdoor talks and walks every year – see the latest “**Butterfly Events in Dorset**” pamphlet (sent out with the Branch Newsletter twice a year) or

consult the branch’s website, www.dorsetbutterflies.com.

Other events in Dorset are run by different organisations, and you can find out about them from various publications and websites, including the following:

- **Dorset Wildlife Trust.** See www.dorsetwildlife.co.uk or tel 01305 264620. **The Kingcombe Centre** in West Dorset is now run by DWT, and offers courses as well as events: www.kingcombe.org or tel 01300 320684
- www.visit-dorset.com can be searched under “nature/green events”.
- **Moors Valley Country Park (East Dorset)** www.moors-valley.co.uk
- **Avon Heath Country Park (East Dorset).** www.dorsetforyou.com/avonheath
- **Durlston Country Park (Near Swanage).** www.durlston.co.uk

Nationally, the **Field Studies Council** holds residential courses in venues throughout the UK. Tel 0845 345 4071 or www.field-studies-council.org.

There are some butterfly/moth courses.

Some general advice on identifying butterflies

Identifying butterflies and moths can be made easier by doing a bit of research before you go out:

- What time of year is it? Most butterflies are only on the wing for a few weeks each year, so check the identification chart on pages 20/21 of this booklet (or any of the identification guides) to find out what species are about.
- Many butterflies stick to certain habitats – Speckled Wood are found in wooded areas, Marbled Whites in grassland, etc.
- What part of the British Isles are you in? The Lulworth Skipper is only found on the south coast, while the Chequered Skipper only appears in Scotland.
- How is the butterfly behaving? If it's blue and it's flying along the top of a hedge, it's probably a Holly Blue – none of the other Blues fly this high.

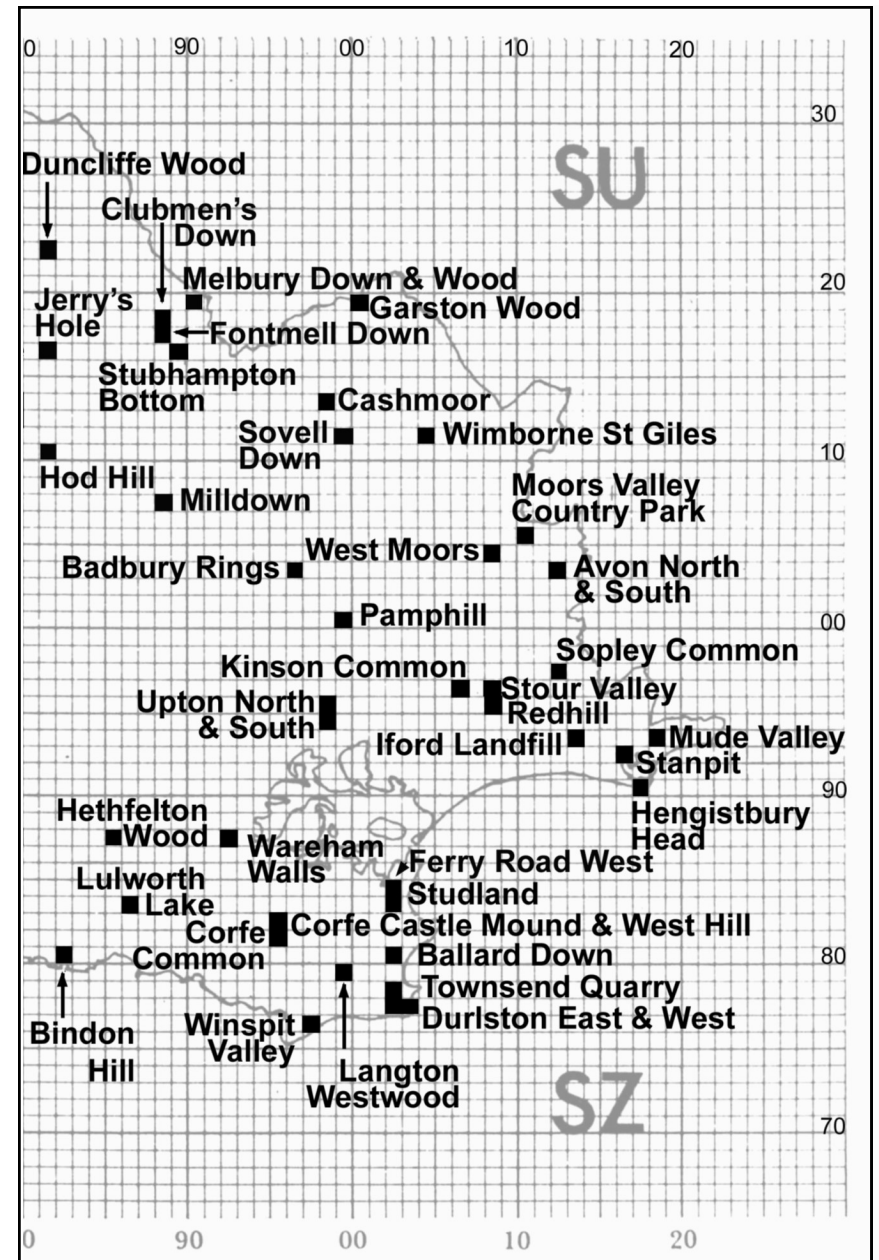
Learning how to record

butterflies

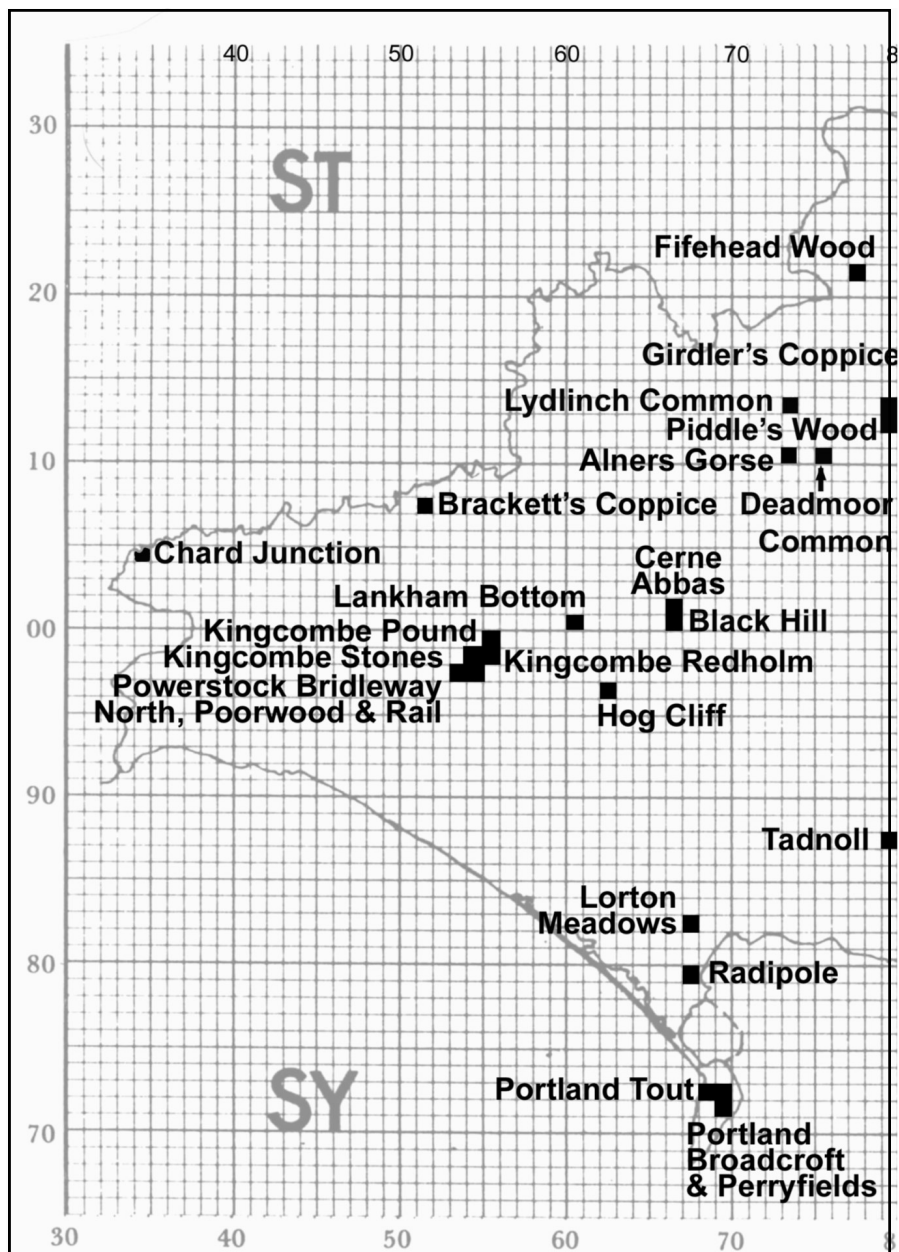
Read this booklet! Dorset Branch also organises annual meetings of the butterfly walkers in the north, south, east and west of the county where you can talk to the walk organisers and hear about the results of the year's monitoring. You could also go on any of Dorset Branch's walks and talk to the leader.

There are plenty of people willing to help you – just ask!

Note: There are also six mini-walks on the Purbeck Ridge between Bindon Hill and Ballard Down, which only need a minimum of 4 walks per year in May, June, July and August.



Map of Transect Walks in Dorset



Sending in your records

It is helpful to us if you can send your records electronically, but paper records are also welcome.

Sending Electronically

1. The best method for occasional recorders is to use our website:

www.dorsetbutterflies.com where you will find a map-based recording form that makes working out your grid references easy.

Please note: your record can only be used properly if you put in a map reference. (see page 17). Also, please answer the question "Will you be sending this information via other means?"; this prevents your record being double counted. It would be preferable for you to send in your records only once, but we know some people want to tell others of their sightings immediately even though they will be sending them in as part of e.g. their transect walk results later.

2. If you are sending in a large number of records from many different sites there is an official electronic form which can

be requested from Bill Shreeves, (contact details at end of booklet). It is very important that you use this form and not one of your own design, because the conversion into our mapping system is a very complex procedure and we cannot cope with non-standard forms. An appropriate grid ref for all your sightings is most important.

3. If you normally send all sorts of records besides butterflies to the Dorset Environmental Records Centre you can now register for their Living Record scheme. Go to www.derc.org.uk and click "Living Record" in the top bar. Once registered you can enter your records directly on to a map. From there, Martin Raper (see contacts) can recover them for our butterfly records. However, if you are also sending in the records in some other way please contact Martin to avoid duplication.

Sending in your records on paper

There are two main recording forms:

- Butterfly Casual Recording Form
- Butterfly Site Recording Form

The casual recording form is best if you are recording a few butterflies at a lot of locations.

The site recording form is for where you are recording butterflies at just one location, such as your garden, possibly over a period of time.

You can obtain copies of either form:

- From our website: www.dorsetbutterflies.com
- From Bill Shreeves (see end of booklet for contact details)
- At many of our Branch meetings, especially the

Walkers' meetings. All meetings are listed in our "Butterfly Events in Dorset" list, sent to members three times a year and on our website.

Where to send your form when you have completed it is covered for each method of recording in the appropriate section of this booklet.

Completing the Casual Record Form

This form comes with a lot of instructions printed on it, so by following these and looking at the example on the following page you will hopefully find filling in this form quite easy.

The "Notes" box on side one is intended for notes such as the one at the foot of this page.

<p>Notes. 6 May - Ashmore:</p>	<p><i>Orange Tip egg(s) on lady's smock</i> <i>Peacock caterpillars (100+) on nettles</i></p>
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Checklist of rules for transect walkers

TIME Walk only between 10.45 and 15.45 BST. Record times on forms.

TEMPERATURE - Measure the temperature in the shade with a thermometer and fill in the form.

Below 13° C Do not walk

13° – 17° C Only walk if at least 60% sunshine

Above 17° C No sunshine necessary to walk

WIND SPEED Use Beaufort Scale below. Do not walk at 5 or above.

		Speed in mile/hr
0	Smoke rises vertically	
1	Slight smoke drift	1 – 3
2	Wind felt on face; leaves rustle	4 – 7
3	Leaves and twigs in slight motion	8 – 12
4	Dust raised; small branches move	13 – 18
5	Small trees in leaf begin to sway	19 – 24
6	Large branches move; telephone wires whistle	25 – 31

WALK TECHNIQUE Do not record butterflies more than 5 metres ahead or more than 2.5m on either side of you. Keep strictly to the walk route. Try not to count the same individual twice. If you have to go back to identify a species, do not start recording again until you return to the point where you turned back.

END OF THE WALK Add up and fill in the totals for each section and for the whole walk. Make sure all figures are clear, and dots and dashes are overwritten with the numerical total. Check you have filled in any additional data on egg-laying, nectar, etc. Send in your record sheets by the 2nd week of October at the latest, but preferably as soon as you have completed a walk. Please find a replacement walker or ring the organiser if you find you cannot do your walk.

Completing the Site Recording Form

A lot of the form is self explanatory, so we only explain below parts which might be confusing. If in doubt do not hesitate to contact your Walk Co-ordinator.

In the “site information” box give us all the detail you can—the map grid reference is the essential item (see page 17, but please give the nearest town and the county as well. If the site has a name (e.g. “Turbery Common”, or “garden of 32 Tarrant Drive”) please give it. “Status” asks for any useful information you may have—that the site has SSSI status, for example, or is a DWT reserve.

Habitat types are suggested—tick the box or boxes which best describe the site.

The sketch map isn’t vital but is very useful for someone else trying to find the same colonies of butterflies in three years’ time—don’t worry that it isn’t artistically perfect!

You are asked to record not only adult butterflies, but also ova (eggs), larvae (caterpillars) or pupae (chrysalises) as well as mating pairs. This is all very useful data to find out whether the butterfly is breeding on this site or just passing through.

On the other side of the form you are asked for the length of your visit. This helps to show the abundance of butterflies on the site, as the number you record is related to the length of time you were there. The information about the weather is also important for this reason—you will see fewer butterflies in poor weather than on a sunny day.

do your walk at the last minute, you are asked to contact your organiser as soon as possible, so they can try and arrange to cover it. Reliability is important – too many missed weeks may invalidate the results of that walk for the entire year.

Recorders are also encouraged to note day-flying moths.

If you are interested in taking up transect walking, please contact Bill Shreeves (see inside back cover).



How to fill in the transect form

An example of a completed form is shown below. This is the most complex form you will be asked to use—your version might vary slightly from the one shown.

Most of the boxes are self explanatory, but the following points should be noted:

- “Week” is the week number, as explained in the box on page 30.
- End temperature calls for you to record the temperature in the shade at the end of your walk.
- “Sun” is your estimate of the percentage of sun you have had during the entire walk. It is the percentage of TIME that the sun casts a shadow. Ignore that you may be walking in the shade: it is the cloud cover that counts. You are asked to estimate this figure separately for each sector you walk, and this box is for your estimate of the overall average.
- “Wind” requires the wind speed– see walking rules on

Example of a completed transect form (part of)

 **F2: BUTTERFLY TRANSECT WEEKLY FIELD RECORDING FORM** 

SITE NAME RECORDER

YEAR DATE WEEK NO. START FINISH

AVERAGE TEMP. (°C) AVERAGE WIND SPEED (0-6) WIND DIRECTION

Section	1	2	3	4	5	6	7	8	9	10	Total	
Small Skipper	2						3	2	2		9	SS
Essex Skipper.												ES
Dingy Skipper.					1							DS
Large Skipper.	1		2	1							4	LS

different results to the others, suggesting local factors are the cause. The scheme is called the UK Butterfly Monitoring Scheme and is run jointly by Butterfly Conservation and CEH (the Centre for Ecology and Hydrology).

Transect walking in Dorset

Dorset has been running some transect walks for over 30 years – Ballard Down started in 1976. This sort of long-term data is invaluable, and the data from these walks is used by researchers all over the country. A wide variety of over 60 walks is now running, some are long and have many different sectors, while others are short and have only one sector. There are walks in woodland, heathland, downland and coast land. The walkers are as varied as the walks: Fontmell Down has been walked by teachers, dentists, clergymen, nuns, nurses, housewives, retired people, the self-employed and the unemployed. Some of the walks are on private land, with the landowners' permission.


More walkers are always needed. One big advantage to doing transect walking is that the walk has probably been

done for several years already, so there are records showing what butterflies you are likely to see in each sector, taking some of the guesswork out of identification for the less confident walker!

If you are able to volunteer, then you will be put in touch with the organiser of the walk you want to do, who can probably find somebody to do the walk with you for the first few times, to help you with both the route and the butterfly identification. Beyond the walking, the duties are limited – you just have to record your findings on a special form (example on page 29) and send the form into your walk organiser promptly. You will agree with your walk organiser at the beginning of the year which weeks you will walk. Some walks are done by a single walker throughout the season, others are shared by a team of walkers who sign up to do specific weeks.

The walking year is divided into 26 weeks. See the box on page 30 for a list of week numbers (needed when you fill in the recording form).

If you find yourself unable to



Butterfly Conservation
in association with
Biological Records Centre

NAME: A. N. OTHER.
YEAR: 2004

OS Grid ref: **ST 875 196**
County: **DORSET**

DATE(S) OF VISIT(S): *please list overleaf*

BUTTERFLY SITE RECORDING FORM

NAME: A. N. OTHER.
ADDRESS: Adonis,
& Tel. No. 5, Skipper Lane,
Insectville,
Buttershire

YEAR: 2004

OS Grid ref: **ST 875 196**
County: **DORSET**

DATE(S) OF VISIT(S): *please list overleaf*

Sea shore / cliffs / salt marsh / dunes etc	1
Freshwater edges (lakes / rivers / canals)	2
Heath / scrub	31
Calcareous grassland	34
Acid grassland	35
Meadow (unimproved)	38
Broad-leaved deciduous woodland	41
Natural coniferous woodland	42
Mixed woodland	43
Raised / lowland Bog	51
Blanket / upland Bog	52

Marshes / fens	54
Rocky inland habitats / screes etc	6
Fertilized / improved / reseeded grassland	81
Crops	82
Orchards / plantations / commercial forestry	83
Tree lines / hedges / small woods	84
Parks / gardens / churchyards	85
Urban areas / industrial estates	86
Fallow / waste / disturbed land	87
Quarries / pits	89
Road / rail verges, cuttings etc	90

HABITAT TYPES: Please tick box(es) that apply to the area visited and give any other details about habitat / land use:

Sea shore / cliffs / salt marsh / dunes etc	1	
Freshwater edges (lakes / rivers / canals)	2	
Heath / scrub	31	
Calcareous grassland	34	<input checked="" type="checkbox"/>
Acid grassland	35	
Meadow (unimproved)	38	
Broad-leaved deciduous woodland	41	
Natural coniferous woodland	42	
Mixed woodland	43	
Raised / lowland Bog	51	
Blanket / upland Bog	52	

Completed example of side one of Site recording form, top half

Method Five: Recording by Transect Walking

A transect walk is a butterfly-monitoring walk which takes place once a week from the beginning of April to the end of September at the same place. It follows the same route every time, and there is a set of rules for how the walk and count are done which ensure the results are comparable over a period of time.

Background

The concept of transect walking was devised in the 1970s by Dr Pollard at the former Institute of Terrestrial Ecology at Monk's Wood, Cambridgeshire. The area to be monitored is divided into sections (called sectors or transects), which have their own types of habitat. E.g. sector one might be through woodland, sector two through scrub and sector three through open grassland. A walk is then planned to pass through all the sectors, which is walked once a week, counting the number of butterflies of each species seen in each sector.

The point of the walk is not to produce an accurate count of all the butterflies in the areas being walked, but to make a statistical sample to enable a measure of any fluctuations from week to week and year to year. This sort of controlled, long-term counting allows data to be gathered which can be used to manage the land being walked, for example, if a change in the timing of the grazing of the site has had an effect on the butterflies.

Sometimes cause and effect are fairly easy to deduce, but often it is unclear as to whether the decline in the population of a given species is due to a factor under local control (e.g. habitat management), or due to an external factor such as the weather. This problem is addressed by a scheme whereby a number of sites all over the country send in their results to be collated. This is used to produce an annual report which can show whether populations of a given species are suffering the same problems everywhere – due, say, to a wet winter – or whether one site is producing

If possible, please add a sketch map of the site and area visited and any comments:

SPECIES SEEN (overleaf)
Enter the date and length (approx. minutes) of each visit and indicate weather conditions overleaf. Record the actual number of each species seen or use the following codes: A: only 1 seen, B: 2-9, C: 10-29, D: 30-99, E: 100+. If early stages (ova, larvae or pupae) or mating of a particular species are seen, use codes O, L, P or M, respectively.

Please return completed forms to:
Mr W. G. Shreeves
5 Butt's Mead
Shaftesbury
Dorset SP7 8NS
Tel: 01747 852587
butterflies@nascr.net

...or to Butterfly Conservation, Manor Yard, East Lulworth, Wareham,
Dorset BH20 5QP

Butterfly Conservation
Registered in England No. 2206468 Registered Charity No. 254937

Completed example of side one of Site recording form,
bottom half

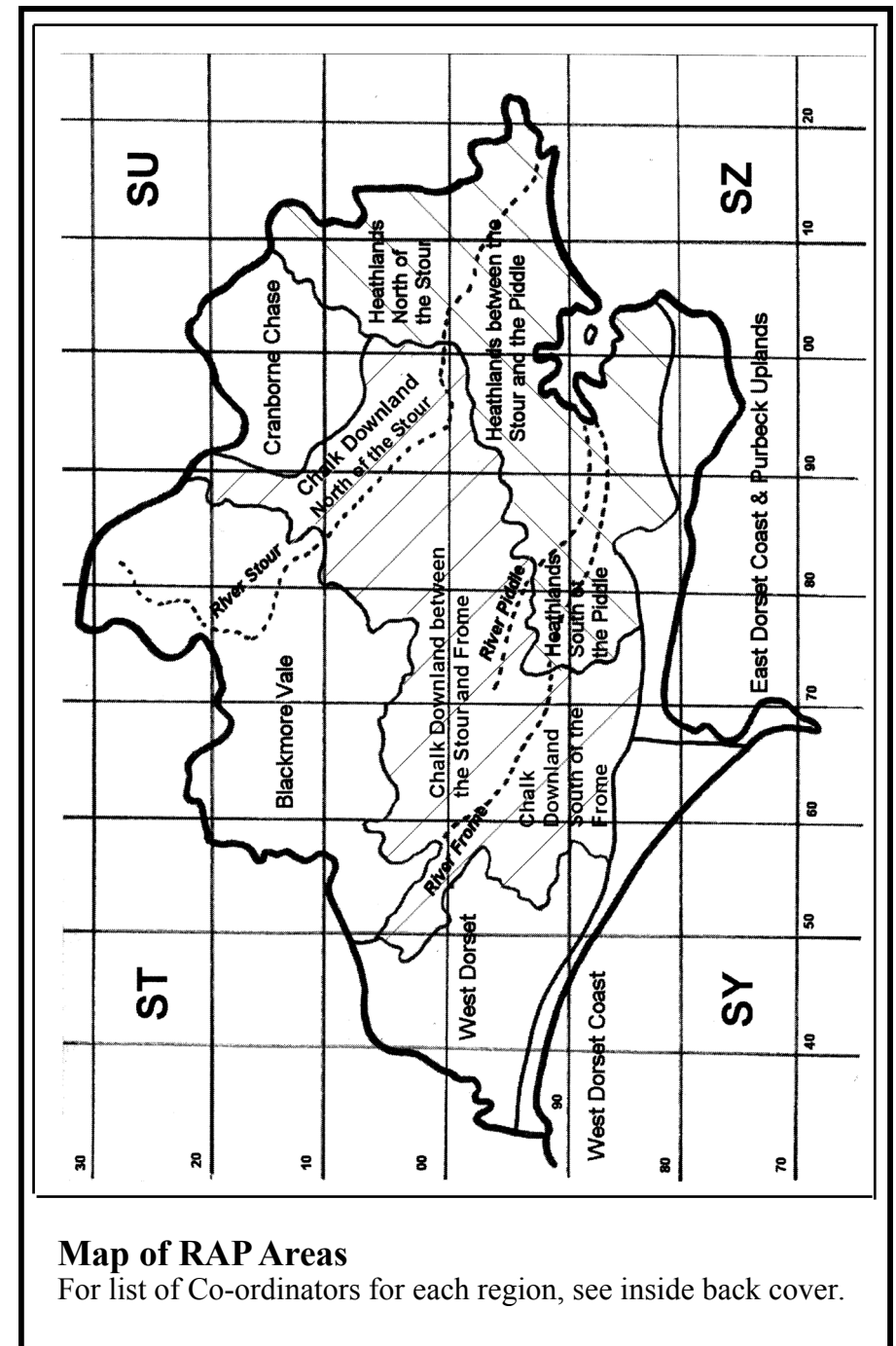
What happens to the records?

Explaining what happens to the records in detail would take a lot of pages, so the following is a rather simplified outline.

All records which ultimately feed into official databases are verified by the Dorset Branch Records Officer to ensure that obviously false recordings are not used. It is easy to slip a line when filling in a form, or for a new recorder to mis-identify a butterfly, and the verifier will use their knowledge of butterflies to pick up unlikely records. The verifier may contact the recorder to talk about the record, in case something unlikely has been spotted.

After verification, all records are computerised (data inputters are always needed to help with this). The computer records themselves are then validated to check for any errors in data entry. Final versions of the database are ultimately passed over by Dorset Branch to DERC and national Butterfly Conservation, who become the custodians and will eventually make them available on the National Biodiversity Network (www.nbn.org.uk).

Once computerised, the records are made available to anyone needing them (a charge may be made to commercial or statutory organisations, but the information is given free to students). These records are then used in myriad ways to help improve our knowledge of butterflies and their habitats. Dorset has an impressive range of data, which is very heavily used, not least because some of its transect walks have been going for over 30 years now. This long time scale helps overcome temporary recording “blips” (like the lack of records in early 2001 due to the foot and mouth restrictions) and also helps researchers to see how changes in the numbers of butterflies are linked to weather and to the way the land has been managed (assuming this data is available).



Map of RAP Areas

For list of Co-ordinators for each region, see inside back cover.

recorders' meeting where you can meet other surveyors and co-ordinators. These are held in February or March, and there are four meetings which cover the County between them: in Kingcombe for the West, in East Stour for the North, in Wimborne for the East, and in Wareham for the South. The dates of the meetings are given in the "Butterfly Events in Dorset" list which is published with the Dorset Branch Newsletter, and on the branch website: www.dorsetbutterflies.com.

How to carry out a R.A.P. Timed Survey

A) Before your visit

Check that you can identify your target species and the foodplants eaten by its caterpillars. Study the Ordnance Survey Map (Explorer series are best) to locate the precise position of your site, and look at your site recording form to be sure you know what information you will need to record. Since global warming has started to bring forward the dates of emergence for many species it might be a good idea to contact your co-ordinator before the date of expected emergence, in case there is news of it being an 'early' year for your target species.

B) At the site for the Target Species

Make sure that the weather is sufficiently dry and sunny for butterflies to be on the wing. Spend a little time locating the most promising flight areas for your target species. If they cover more than one kilometre square be prepared to collect more than one set of data. Walk a zig-zag route through the assumed flight areas noting the times you started and finished counting. Record the actual numbers seen for all species, not just the target species. Make a note of any caterpillar food plants and nectar flowers used by the target species and any signs of management of the habitat – e.g. grazing animals, scrub control, grass heights. Note down the best location for the target species by giving it a six figure map reference (See p.17).

C) After the Visit

Transfer your data to the Site Recording Form, taking care to put in more than one set of data if your survey covered different kilometre squares. Key points:

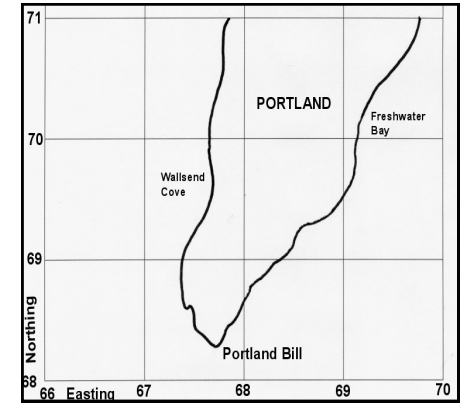
Map References

A "Map reference" or "Grid reference" describes the place you have seen a butterfly very accurately so you must use them to record your sightings.

These days, there are many of GPS gadgets that can work out your grid ref: from a smartphone app to a dedicated GPS device. These may give you a very detailed location, with too many digits for our system, which needs 6 digits. To reduce the number of digits, you divide what is shown in two halves and take the first three digits of each. A reading SY8065084590, for example, is split into 80650 and 84590, so the grid ref you give us is SY806845.

Another way of finding the grid ref is to use our website www.dorsetbutterflies.com. On the "submit sightings" page is a map tool you can use to precisely pin-point where you saw your butterfly, which will automatically provide the grid ref. There is also a way of converting a postcode to a grid ref - www.nearby.org.uk.

If you want to use a physical map, you will need the Ordnance Survey



map for the appropriate area - 1:50,000 or the 1:25,000 scale map. On OS maps, the UK is divided into 100 kilometre (km) squares. Each of these is given a pair of letters to identify it and Dorset covers parts of squares ST, SU, SY and SZ (see map on page 25). There is a panel to the side of every OS map which gives the key and also shows the squares this map covers. Some also show the letters on the four corners of the map itself.

These 100km squares are then divided into kilometre squares, described with numbers. These are shown at the bottom of the map by a row of numbers called Eastings, and up the sides by another row of numbers, called Northings. Record the Easting first and the Northing second—think of an

aeroplane which has to go along the runway before it goes up into the sky.

These numbers allow you to identify a kilometre square: Portland Bill, for example, is in square 67/68, 67 being the Easting and 68 the Northing.

To give even more accuracy, you imagine each of these squares divided into another ten squares, so if your butterfly was seen halfway between 68 and 69 you describe it as 685;

if it was very near 69 but not quite there it is described as 689. There is a degree of estimation in this, but it is possible to be quite accurate. You use the same technique for the Northings, so Portland Bill is more accurately described as being at SY 677683.

Method One: Recording every butterfly you see

We all see butterflies—as we look out our window, as we go to the shops, on the walk we take. You may feel that recording a few common butterflies isn't very worthwhile, but it is. Species which were once common in Dorset are now rare, and we want to ensure that this does not happen to more of them. We need to identify downward trends early, so noting down even a Large White is a valuable exercise. This method of recording is as

simple as sending us a note of any butterfly you see. If your sightings are to be of use, however, it is important that you give us sufficient detail, so we ask you to use our recording forms—see the section of this booklet called “Sending in your records” (page 9) or use our website. When completed, send your forms to Bill Shreeves (see details inside back cover).

Method Four: Recording target species for the Regional Action Plan

What are Target Species?

After the Earth Summit meeting in Rio de Janeiro in 1992 the British Government was committed to developing a national Biodiversity Policy. In response to this Butterfly Conservation, with funding from World Wide Fund for Nature, wrote Action Plans for conserving the 25 most threatened Butterflies: these are known as the ‘Target Species’. They are marked with an asterisk on the Butterfly Identification Chart on pages 20/21.

What is the Regional Action Plan?

Butterfly Conservation divided Britain into separate regions, each of which would produce plans for the conservation of the target species in their area. The plan for South-Central England (Dorset, Hants & Wilts) was completed in 2000. We organise the work in Dorset by dividing our county into natural regions each with a co-ordinator leading a team of surveyors (see map on page 25; co-ordinators are listed together with other contacts inside the back cover). Each Regional Co-ordinator arranges recording visits to all the sites of the Target Species at least once, and hopefully twice, in good sunny weather during their peak flight periods.

How to become a Dorset R.A.P. surveyor

If you are interested in helping, you should work out which dates in the summer you will be able to do surveys and contact the Regional Co-ordinator in the area you want to work (see list inside the back cover). The co-ordinator will supply names of the places, map references, and possibly sketch maps of the sites they would like you to survey. Also provided will be the approximate best dates to look for the target species, site recording forms (see p.12/13) and an example showing how the form should be filled in. It could be helpful for you to attend the appropriate annual

Method Three: Recording in your garden

The Dorset Branch of Butterfly Conservation uses garden recording, like the “Count every butterfly” and “Kilometre Square” methods, as a way to encourage people to record butterflies. The purpose of relating it only to what you see in your garden is to give your recording a focus—you might find it a chore to remember to record every butterfly you see when you are out, but to have a sheet handy to note the butterflies you see in your garden is easy and satisfying. You can build up your own count of the number of species you see and perhaps introduce plants to attract more. A small urban garden should attract at least six species, while a large garden in a rural setting could see up to twenty.

The form you use is a white one entitled “Butterfly Conservation National Garden Butterfly Survey”. This asks people to record the first date in Spring, Summer and Autumn on which they see any species in their garden, together with information on the type of garden and the

nectar plants in it. The forms for this scheme are sent to Butterfly Conservation members each year with the national “Butterfly” magazine, or are available at the annual Walkers’ meetings, or can be obtained from the Butterfly Garden Records’ Co-ordinators, Adrian and Alison Neil (see contacts list inside back cover). Completed forms are sent to the Neils.

The information gathered is used locally and also passed on to a UK-wide garden recording scheme, run by Dr Margaret Vickery. She reports back annually on the findings of the survey in the “Butterfly” magazine.

A booklet by Jenny Steel on gardening for butterflies is sold by Dorset Branch—contact Lyn Pullen if you are interested (see contacts list inside back cover).

Method Two: Kilometre Square recording

This is a method to encourage you to methodically record butterflies near your home, and is therefore particularly suitable for those who cannot drive.

There is nothing special about how the butterflies are recorded in this method – you still list every butterfly you see, using the same recording forms (see page 9). The distinguishing factor is that you concentrate on the area around your home to give you a focus for your recording.

All you need to do is to obtain an Ordnance Survey map of the area around your house, and identify the kilometre square within which it falls. You then identify the eight squares which surround this central square, and this is the area you aim to survey. You will probably need to stick to the roads and footpaths available, to avoid trespassing, but if you know the local landowners you can always ask them for permission to go onto their land.

It is helpful if you can aim to

cover the area more than once a season, as different butterflies are on the wing in different months.

Use the information on the butterfly identification chart (pages 20 & 21) to help you identify which species you might see in the habitats within your squares. The flight plan will also guide you as to which months to go looking for which species.

The fascinating thing about this method is that it often leads to you finding footpaths and habitats quite close to your home that you never knew existed – try it and see!

Return your forms to Bill Shreeves (see contacts list inside back cover)

Butterfly Identification Chart

KEY. ** Butterflies regarded as high priority species: these are target species in the Regional Action Plan
 * Butterflies regarded as medium priority species; these are target species in the Regional Action Plan
 ? An F in this column indicates that the female and male butterflies of this species look very different

BUTTERFLY	?	J	F	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	ND	HABITAT	CATERPILLAR FOODPLANTS
Small Skipper													Open/rough ground, clearings	Grass, Yorkshire Fog
Essex Skipper													Open/rough ground, clearings	Grass, Cocksfoot, Creeping Soft
Lulworth Skipper**													South-facing Purbeck hillsides	Grass, Tor Grass
Silver-spotted Skipper**													South-facing, close grazed downland	Grass, Sheeps Fescue
Large Skipper													Open/rough ground, clearings	Grass, Cocksfoot, False Brome
Dingy Skipper*													Open/rough ground, hillsides	Birdsfoot Trefoil
Grizzled Skipper**													Open/rough ground, clearings	Wild Strawberry, Creeping Cinquefoil
Wood White**													Woodland rides, clearings	Tufted Vetch, Meadow Pea
Clouded Yellow													Downland, but anywhere	Clovers, Birdsfoot Trefoil
Brimstone	F												Woodland, downland, lanes	Purging or Alder Buckthorn
Large White													Anywhere	Crucifers, Cabbage
Small White													Anywhere	Crucifers, Cabbage
Green-veined White													Woodland rides, lanes	Crucifers, Garlic Mustard
Orange Tip	F												Woodland rides, lanes, meadows	Lady's Smock, Garlic Mustard
Green Hairstreak													Downland, scrubby commons	Gorse, Rock Rose, Broom
Brown Hairstreak**													Uncut Blackthorn scrub	Blackthorn
Purple Hairstreak													Mixed Oak/Ash woodland	Oak
White-letter Hairstreak*													Flowering Elm hedgerows	Elm, Lime
Small Copper													Downland, open rough ground	Sheep's Sorrel, Docks
Small Blue*													Downland, short turf calcareous areas	Kidney Vetch
Silver-studded Blue**	F												Heathland rides/firebreaks	Heathers, Gorse, Birdsfoot Trefoil
Brown Argus													Mainly downland, some woodland	Rock Rose, Storksills
Common Blue	F												Downland, open rough ground	Birdsfoot Trefoil, Restharrow
Chalkhill Blue*	F												Chalk/limestone downland	Horseshoe Vetch (tall)
Adonis Blue*	F												Sheep-grazed calcareous downland	Horseshoe Vetch (short)
Holly Blue													Lanes, rides, anywhere	Holly (1st Brood), Ivy (2nd Brood)
Duke of Burgundy**													Downland, woodland rides/clearings	Cowslips, Primroses
White Admiral*													Woodland	Honeysuckle
Purple Emperor**													Woodland	Sallows
Red Admiral													Anywhere	Nettles (full sun)
Painted Lady													Anywhere	Thistle, Mallow
Small Tortoiseshell													Anywhere	Nettles (young, warm/sheltered)
Peacock													Anywhere	Nettles (mature, full sun/sheltered)
Comma													Lanes, almost anywhere	Nettles (in hedge), Wych Elm
Small Pri-bordered Fritillary**													Coppice woodland rides, commons	Dog Violet
Pearl-bordered Fritillary**													Coppice woodland rides, commons	Dog Violet
Dark Green Fritillary													Downland	Dog and Hairy Violet
Silver-washed Fritillary													Woodland	Dog Violet
Marsh Fritillary**													Meadows, rough ground, downland	Devilsbit Scabious
Speckled Wood													Lanes, hedgerows, shady glades	Grass, Cocksfoot, Couch
Wall*													Downland	Grass, Tor, Cocksfoot, Yorkshire Fog
Marbled White													Downland, open rough ground	Grass, Fescues, Cocksfoot
Grayling*													Heathland, some downland	Grass, Fescue, Hair
Gatekeeper													Lanes, hedgerows, long grass	Grass, Meadows, Couch, Fescues
Meadow Brown													Lanes, rides, long grass	Grass, any, not fussy
Ringlet													Damp long grass, Bracken	Grasses, Tufted Hair, Couch, Meadow
Small Heath*													Downland	Grasses, Dogs Tail, Fescues, Bents