



Lothians Newsletter

Issue 3

Autumn 2012

When I started planning these local newsletters, I decided to run a series of articles on the State of a Species of Butterfly in the Lothians as a theme. This Autumn issue features the Small Pearl-bordered Fritillary and is based on an article I wrote for the Pentland Hills Beacon. Previous issues of the newsletter have featured articles on the Green Hairstreak and the Northern Brown Argus. These can be read on the branch website (www.eastscotland-butterflies.org.uk), for those of you who missed the first issues. This issue contains two such essays. As well as the one on SPBFs, this issue contains an article by Tom Delaney on the Grayling butterfly, which is based on an article he wrote for the Edinburgh Natural History Society magazine. I would urge anyone else who would like to contribute to the newsletter not to be bashful and let me know, either on 0131-332 0615, or email: r.buckland@blueyonder.co.uk.

Contents

The State of Small Pearl-bordered Fritillaries in the Lothians*Richard Buckland*

Grayling butterfly in Lothian and eastern Borders.....*Tom Delaney*

The State of Small Pearl-bordered Fritillaries in the Lothians *Richard Buckland*

The Small Pearl-bordered Fritillary is an uncommon butterfly in the Lothians. This is almost certainly a result of the region no longer being suitable for the caterpillar food plant, Marsh Violet (*Viola palustris*). In Scotland this is mostly confined to areas of wet or damp ground suitable for marsh plants, such as moorland and lowland raised bogs. In practice, that means the west of the country and all areas north of the central belt in the east. This leaves a great big hole in their distribution in the Lothians and Borders. The species is still locally common through in the west of the central belt with colonies gradually becoming scarcer as you travel east. As far as the Lothians are concerned, the butterfly is only found in significant numbers in West Lothian. Here, there are scattered colonies in the peat bogs of the area around Slamannan and in the area around Blackridge and Harthill. Further east than that and you are struggling, although colonies are known at Easter Inch Moss at Bathgate and near Livingston. Currently, none are known after Livingston, until you reach Balerno, where SPBFs are now breeding in the Pentland Hills Park. The photograph overleaf was taken in the Park two years ago.

As far as I am aware, Small Pearl-bordered Fritillaries were first recorded in the Pentland Hills at Red Moss in Balerno in 1996 by a Mr G Hopwood, which is not that long ago. They have since also been recorded in the Pentlands at Baddingsill Burn near Carlops in 2000. The only other colony beyond those is at Gladhouse Reservoir which is in the area rich in peatland between the Pentlands and the Moorfoot Hills.

As part of the first Edinburgh Local Biodiversity Action Plan (2000) (Edin. LBAP), Butterfly Conservation (BC) was asked to survey the colony at Balerno with a view to assessing how large it was and to advise on how best to conserve it.

BC identified a colony consisting of approx. 150 adults. This is considered a medium-sized colony for this species.



Small Pearl-bordered Fritillary at Red Moss
Richard Buckland

The conservation of this colony is obviously important, given the rarity of this species in south-east Scotland. BC therefore monitor the colony annually for the Edin. LBAP. This takes the form of BC carrying out a Timed Count on the colony annually during the peak adult flying time. A Timed Count is a survey consisting of a walk round the colony site counting all the adults of the target species in a particular time window, trying not to count the same butterfly twice. Usually counts are carried out on different days about a week apart, to be sure of catching the peak flying time. So far the numbers recorded in the peak count annually are: 40; 19; 12 and 48 (2003-2006) and 22; 15 and 12 in 2009-2011, although the latter figures were obtained in half the time of the initial visits. Despite the figures fluctuating somewhat, the data indicates that the colony seems to be reasonably stable. It is a general rule in butterfly circles that such counts record about a third of the total adults present in the colony. So we should perhaps conclude that the colony may have decreased in size from when it was first surveyed in 2001, although it is still doing reasonably well.

Grayling butterfly in Lothian and eastern Borders *Tom Delaney*

The Grayling is a betwixt-and-between sort of character in the butterfly world, as it cannot decide whether it is a coastal or an inland species. The majority in Britain are found round the coast, as it's preferred habitat is on the rocky slopes of cliffs, and on sand dunes. Here, moving sand and bare cliffs provide suitable conditions for the growth of the fine grasses that the larvae feed on. The butterfly is common at various sites along the Berwickshire coast. It even extends round to Edinburgh, where it has been recorded mainly on inland sites (see Table). It is also found at Fairy Glen, which is an inland site in the Lammermuirs. I have it on good authority that it has also spread from there to Linn Dean Water on Soutra Hill (V. Partridge, pers. comm.).

So what attracts it inland on occasions? Here it is often found on bare post-industrial sites such as mining bings, railway lines and quarries, where soil conditions do not allow grasses to form a sward and fine grasses such as Fescues can flourish. In and around Edinburgh it is found on sites with rocky outcrops, such as Calton Hill and Queen's Park. Also on brown-field sites, such as the Old Prestonpans mine site and the old railway yard at Millerhill (see Table). All these sites have in common the fact that they are dry, well-drained, open areas with sparse vegetation and plenty of bare ground.

The Grayling can also be considered betwixt-and-between as it is not showy, as many of the other butterflies flying in late summer are. In contrast to the bright, colourful finery of Peacock, Red Admiral and Small Tortoiseshell, it's disruptive pattern and muted shades work to conceal rather than reveal, but, close up, it shows itself to be really pretty. It seems to spend less time flying than most other species and more time perched, inconspicuous, on vegetation or on the ground.

Their resting position is very characteristic - with closed wings angled perpendicular to the sun in order to obtain maximum warmth. When sufficiently warmed up, they turn head-

on to the sun. In this way they are able to exert a form of temperature control over their bodies.

Despite its charms, the Grayling shares with a number of other species (Meadow Brown, Grizzled Skipper) the burden of rather a dreary name, and, although it is not one of our commonest butterflies, it does not have quite the cachet associated with species that are scarce (Large Heath), are hard to find (Purple Hairstreak), or are newcomers to our area (Speckled Wood, Holly Blue, Small Skipper).



Grayling at Meadowmill *Tom Delaney*

Perhaps as a result of these characteristics, its distribution and population in Lothian and Borders are not all that well known. Are its numbers increasing or declining? Is its range expanding or retreating? Is it restricted to known, traditional sites, or is it breaking new ground? In the face of these unknowns, there seems to have been a resurgence of interest in the species locally, with several reports on lothianbirdnews: and one morning this year, at one site there were exactly as many watchers (eight) as there were Graylings.

According to the National Biodiversity Network, its range in Scotland includes most of the east coast as far north as the Moray Firth. Butterfly Conservation say the species is declining in many areas, and it is a UK Biodiversity Action Plan Priority Species.

I first saw Grayling several years ago on Arthur's Seat. According to the Historic Scotland Ranger Service it occurs there every year. Blackford Hill is another regular site, but apparently in small numbers only.

As a first step in trying to learn more, I have started this winter to collate records of its occurrence in the region, and the results so far are tabulated overleaf. Clearly these are somewhat sparse at this stage.

Though the Table is still embryonic, it does highlight some sites in our area where the Grayling has been found year after year in the kinds of natural habitat detailed above. Blindwells on the other hand (derelict, industrial, old-spoil-heap habitat) may be a newer site, colonised only since its use associated with coal-mining was abandoned but clearly holding a thriving population. The Table also seems to indicate quite strongly the period, mid-July, when peak numbers are recorded: e.g. 45 at Fairy Glen in 2006 and 30+ this year at Blindwells.

Graylings have a long-standing presence on Arthur's Seat: in addition to the above data, the Historic Scotland Ranger Service (HSRS) have 72 records for the period covered here. There are two records in August 1999, a blank period and then records in every year from 2005 until the present. Almost all are in July and August, but the earliest records were 23 June in 2009 and 28 June in 2006 and 2010. (Not far away, there is an even earlier date....16 June in 2004 at Millerhill.) The latest sightings were 2 September in 2010 and 3 September in 2008....all singles. In fact, most records here are of singles, though there are a few twos, threes and fours, a couple of sixes and sevens and one ten. The highest count is of a remarkable 30+ on 13th July 2009.

The Wildlife Information Centre (TWIC) also has provided a large number of records, mainly from St Abbs Head NNR and the Berwickshire coast, and also running from 1999 to 2011. The earliest dates in that area were (interestingly) 16 June in 2004 and 26 June in 2000 and 2006.) There seem to be no September records for this area.

Table 1 Some Grayling records in Lothian and Borders 1999-2011

Year	Date	Place	Grid ref.	No.	Observer	Notes
1999	July, week 3	Blackford Hill	NT254705	1	ECR	
2000	July, week 3	Blackford Hill		2	ECR	
2004	July, week 3	Blackford Hill		3	ECR	
2005	27 June	Blindwells*		a few	BH	1 st record here
2005	2 July	Lumsdaine Dean	NT862693	5	NC	
2005	July, week 2	Blackford Hill		2	ECR	
2005	July, week 3	Blackford Hill		1	ECR	
2005	July, week 3	Blackford Glen	NT253703	2	ECR	
2006	3 June	St Abbs	NT917684	4	NC	
2006	14 July	Fairy Glen	NT7169	45	NC	
2006	31 July	Blackford Hill		1	ECR	
2008	16 Aug	Fairy Glen	NT7169	3	NC	
2009	5 Aug	Blackford Hill		1	ECR	Probable
2010	11 Aug	Blackford Hill		1	ECR	
2011	28 June	Blindwells		1	BH	
2011	1 July	Blindwells		6	BH	
2011	3 July	Blindwells		15	BH	
2011	5 July	Blindwells	NT412745	10	AM	egg-laying observed
2011	13 July	Blindwells		30+	BH	
2011	19 July	Millerhill	NT323702	?	per TWIC	
2011	23 July	Blindwells		15	BH	Mating
2011	3 Aug	Meadowmill	NT323702	8	TD	
2011	15 Aug	Blackford Glen		1	ECR	
2011	no date	Regent Road		1	BH	
2011	no date	Old Preston-pans mine site	NT401739	?	per BH	

*numbers have been seen at the Blindwells site most years since 2005, with a peak in 2011, and note the mating record on 23/7/2011.

These records were contributed by:

ECR= Edinburgh Countryside Rangers: BH= Bryan Hickman: NC= Neville Crowther:

AM = Abbie Marland: TD= Tom Delaney: TWIC= The Wildlife Information Centre

To all of these we convey our thanks.

Both the HSRs and TWIC sets of records contain quite a lot of further detailed information and will repay further analysis.

I am keen to continue the investigation and should be pleased if anyone who can provide further records from previous years would send details to: t.delaney2@btinternet.com.

As for 2013, what about putting a note in the diary to have a look in suitable habitat about the middle of July?

Indeed, and I hope this article has helped to encourage you to get out next year and record butterflies despite anything the weather can throw at us!

Good luck,

Richard Buckland, Lothians organiser.

Butterfly Conservation is a non-profit making company limited by guarantee, registered in England (2206468)

It is also a charity registered in England & Wales (254937) and in Scotland (SCO39268). Butterfly

Conservation Scotland can be contacted at Balallan House, Allan Park, Stirling FK8 2QG, Tel 01786 447753.