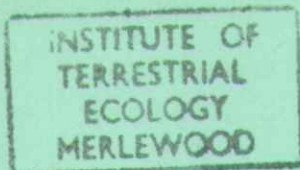


ITE 204
3 DEC 1990



INSTITUTE OF TERRESTRIAL ECOLOGY
(NATURAL ENVIRONMENT RESEARCH COUNCIL)

NCC/NERC CONTRACT HF3/03/214

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Progress report to Nature Conservancy Council

BUTTERFLY MONITORING SCHEME--

E POLLARD AND M L HALL

Monks Wood Experimental Station
Abbots Ripton
Huntingdon
Cambs PE17 2LS

March 1987

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1. INTRODUCTION

The 10-year report of the Butterfly Monitoring Scheme (Pollard et al) was published in 1986. It provides summaries of results for each species, for each of the 86 sites for which we have 4 or more years' data, and an account of some of the more general results that have been obtained.

The emphasis in the next period of recording must change to some degree. We expect to see the emergence of characteristic patterns of fluctuations of the different butterfly species; increasing resolution of the effects of weather; expansions and contractions of range, major impacts of habitat change, and no doubt some totally unexpected events.

Table 1. Sites contributing data to the Butterfly Monitoring Scheme 1976-86 for more than 2 years. X = full record. o = partial record.

[illegible]

	1978	79	80	81	82	83	84	85	86
Carnforth Marsh	X	X	X	X	X	X	o		
Holme Dunes	X	X	X	X	X	X	X	X	X
Newborough Warren	X	X	X	X	X	X	X	X	X
Castle Hill	X	X	X	X	X	X	X	X	X
Gait Barrow	X	X	X	X	X	X	X	X	X
Wart Barrow	o	X	X	o	X	X	X	X	X
Wicken Fen		X	X	X	X	X	X	X	X
Morton Lochs		X	X	X	X	X	X	X	X
Morrone Birkwoods		X	X	X	X	X	X	X	X
St Cyrus		X	X	X	X	X	X	X	X
South Stack Cliffs		X	X	X	X	o			
South Stack Ranges		X	X	X	X	o			
Pewsey Downs		X	X	X	X	X	X	o	X
Ampfield Wood		X	X	X	X	X	X	X	X
Derbyshire Dales		X	X	X	X	X	X	X	X
Alresford Farm		X	X	X	X	X	X	X	X
Sands of Forvie		X	X	X	X	X	X	X	X
West Dean Woods		X	X	X	X	X	X	X	X
Woods Mill		o	X	X	X	X	X	X	X
Murlough		X	X	X	X	X	X	X	X
Martin Down		X	X	X	X	X	X	X	X
Wyre Forest		X	X	X	X	X	X	X	X
Coombes Valley		X	o	X	X	X	X	X	X
Lullington Heath		X	X	X	X	X	X	X	X
Erisey Barton			X	X	X				
Moor Farm			X	X	X	X	X	o	X
Ynys-Hir				X	X	X	X	X	X
Newton Links				X	X	X	X	X	X
Picket Wood				X	X	X	X	X	X
Barnack Hills & Holes				X	X	X	X	X	X
Church Wood					X	X	X	X	X
Batch Farm					X	X	X	X	X
Morris's Wood					X	X	X	X	X
Pynes Farmhouse						X	X	X	X
St Osyth						X	X	X	X
Luckett Wood						X	X	X	X
Stour Wood						X	X	X	X

2. CONTINUITY OF RECORDING

We stress the importance of continuity of recorders and of sites in the scheme. Table 1 shows to what extent this has been achieved. The number of sites that have been lost to the scheme, once 2 years' data have been obtained, is remarkably few. It is a tribute to the enthusiasm of recorders and, no doubt, to the fascination of monitoring.

3. SUMMARY OF CHANGES IN 1986

The summer of 1986 was the second cool and damp summer in succession, although there were spells of warm sunny weather. Surprisingly, the species for which we produce collated index values showed rather more increases than declines in numbers. These changes can be summarised as follows (Table 2).

Table 2 Change in numbers of 28 common species from 1985 to 1986. Where there are two flight periods a year (and where we give separate index values for each) the second flight period is used for the comparison.

INCREASE	INCREASE	DECREASE	DECREASE
greater than 50%	less than 50%	less than 50%	greater than 50%
Large white	Small skipper	Dingy skipper	Holly blue
Small white	Large skipper	Grizzled skipper	Painted lady
Small copper	Green-veined white	Orange tip	Small
Common blue	White admiral	Green hairstreak	tortoiseshell
	Red admiral	Peacock	
	Comma	Dark green	
	Silver-washed	fritillary	
	fritillary	Marbled white	
	Speckled wood	Grayling	
	Wall	Hedge Brown	
	Meadow brown		
	Small heath		
	Ringlet		

The collated 'all sites' index value for the small white was the largest we have recorded and that for the grayling was the lowest. No other species recorded had an extreme value.

For the second year running most species declined sharply at northern sites. The contrast between the relative stability of many species in the south and extreme fluctuations in the north becomes more pronounced as more data are accumulated.

The major migrants, the red admiral and painted lady were both present in modest numbers, but the clouded yellow returned to 'normal' scarcity.

Of the rarer butterflies, the marsh fritillary had a very poor year at most of our 7 widely dispersed sites for this species. The Adonis blue has increased at 3 of our 4 sites but remains in low numbers. The high brown and heath fritillaries have had quite good years. The Scotch argus is one of the very few butterflies in the north which does not seem to have suffered from 2 successive poor summers.

4. REFERENCE

Pollard, E., Hall, M.L. and Bibby, T.J. 1986 Monitoring the abundance of butterflies 1976-85. Research and survey in nature conservation No 2. Peterborough: Nature Conservancy Council.

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