



# NATIONAL MOTH NIGHTS: 18 & 19 SEPTEMBER 2009

by Mark Tunmore & Les Hill

## SYSTEMATIC SECTION

This section details all the species reported over the two nights. The first figure depicts how many individuals of each species were recorded; the second figure is the total number of sites at which the species was recorded. Following the number of sites is a guide to the location of these sites; where a species was only recorded from a single site this is named with the vice-county number in brackets; where a species was recorded from  $\leq$  five sites, the vice-county numbers are listed and for more widespread species the regions are given as defined in the table below.

Critical species normally requiring confirmation by reference to genitalia continue to be accepted as submitted rather than being placed into aggregate groups; however, vice-county moth recorders retain the right to reject these data or aggregate them as necessary. Vague records such as '*Acleris* sp.' or 'Pug sp.' are rejected; larval records and diurnal records of adults are also rejected.

Where reasonably possible, all records using the same site name and/or within the same 1km square are classed as a single site and where a species was recorded as '0' or 'present' with no assessment of abundance, this was replaced by '1', the minimum count required.

Nomenclature follows that defined by the current MapMate Taxa Library; binomials are used throughout, except where ambiguity with the vernacular may exist between sub-species and forms.

Table defining regions and their attendant vice-counties:

Symbol/Region	Vice-counties	Symbol/Region	Vice-counties
A Channel Islands	113	I North-west	58-60, 69-70
B South-west	1-9, 33-34	J Yorkshire and The Humber	61-65
C South-east	10-17, 22-24	K North East	66-68
D East of England	18-21, 25-31	L Isle of Man	71
E East Midlands	32, 53-57	M Southern Scotland	72-84
F West Midlands	36-40	N Central Scotland	85-103
G South Wales	35, 41-46	O Northern Scotland	104-112
H North Wales	47-52	P Ireland	H1-H39

<b>Orange Swift</b> <i>Hepialus sylvina</i>	9/9	CDG
<i>Emmetia marginata</i>	4/4	11, 15, 36
<i>Psychoides filicivora</i>	2/2	59, 60
<i>Nemapogon variatella</i>	1/1	Holland Park (VC21)
<i>N. clematella</i>	1/1	West Wood (VC5)
<b>Skin Moth</b> <i>Monopis laevigella</i>	6/5	BCDN
<i>M. weaverella</i>	1/1	Sandy Point (VC11)

<i>M. obviella</i>	4/4	19, 28, 31, 61
<i>M. crocicapitella</i>	6/5	CD
<i>M. imella</i>	1/1	Holland Park (VC21)
<i>M. monachella</i>	1/1	Minsmere Sluice (VC25)
Common Clothes Moth <i>Tineola bisselliella</i>	4/2	35, 113
Brown-dotted Clothes Moth <i>Niditinea fuscella</i>	1/1	Old Weston (VC31)
<i>Tinea semifulvella</i>	12/11	BCDEFG
<i>T. trinotella</i>	1/1	Sandy Point (VC11)
Laburnum Leaf Miner <i>Leucoptera laburnella</i>	1/1	Southington (VC12)
Apple Leaf Miner <i>Lyonetia clerkella</i>	9/7	BCDFI
<i>Bedellia somnulentella</i>	1/1	Torpoint (VC2)
<i>Caloptilia elongella</i>	3/2	32, 113
<i>C. betulicola</i>	2/2	15, 64
<i>C. rufipennella</i>	1/1	Lower Woods (VC34)
Azalea Leaf Miner <i>C. azaleella</i>	6/5	BCI
<i>C. robustella</i>	1/1	Gower (VC41)
<i>C. stigmatella</i>	25/7	CEIP
<i>C. semifascia</i>	7/7	BD
<i>C. leucapennella</i>	1/1	Lower Woods (VC34)
<i>C. syringella</i>	7/6	BCIJ
<i>C. phasianipennella</i>	103/3	15, 70, H20
<i>Acrocercops brongniardella</i>	1/1	Ferring (VC13)
<i>Phyllonorycter harrisella</i>	1/1	Wigan (VC59)
<i>P. quercifoliella</i>	3/3	43, 44, 60
<i>P. messaniella</i>	10/5	CDP
<i>P. platani</i>	7/1	Buckingham Palace (VC21)
<i>P. oxyacanthae</i>	1/1	Southsea (VC11)
<i>P. spinicolella</i>	1/1	Mewslade (VC41)
Firethorn Leaf Miner <i>Phyllonorycter leucographella</i>	50/17	BCDGIJ
<i>P. salictella</i>	1/1	Lightfoot Green (VC60)
<i>P. salicicolella</i>	1/1	Pucketty Farm (VC22)
<i>P. trifasciella</i>	1/1	Fir & Pond Woods (VC21)
<i>P. acerifoliella</i>	1/1	Sandy Point (VC11)
<i>P. platanoidella</i>	1/1	Lightfoot Green (VC60)
<i>P. geniculella</i>	1/1	Kenilworth (VC38)
<i>Cameraria ohridella</i>	33/17	CD
<i>Phyllocnistis unipunctella</i>	3/1	Lower Woods (VC34)
<i>Anthophila fabriciana</i>	5/5	BDEG
<i>Argyresthia goedartella</i>	32/17	ABCDEFHIJ
<i>A. semifusca</i>	1/1	Pucketty Farm (VC22)
Cherry Fruit Moth <i>A. pruniella</i>	1/1	Hilton (VC31)
<i>A. bonnetella</i>	3/3	33, 34
<i>A. albistria</i>	4/4	11, 21, 34
<i>A. semitestacella</i>	4/3	15, 21, 36

Bird-cherry Ermine <i>Yponomeuta evonymella</i>	3/3	28, 33, 43
Spindle Ermine <i>Y. cagnagella</i>	5/1	Haugh Woods (VC36)
<i>Zelleria hepariella</i>	3/3	24, 38
<i>Swammerdamia pyrella</i>	2/2	Ashurst (VC11)
Ash Bud Moth <i>Prays fraxinella</i>	3/3	11, 31, 34
<i>P. peregrina</i>	1/1	Woodford Green (VC18)
Hawthorn Moth <i>Scythropia crataegella</i>	2/1	Winnersh (VC22)
Honeysuckle Moth <i>Ypsolopha dentella</i>	4/3	12, 36, 38
<i>Y. scabrella</i>	7/7	CDEIJ
<i>Y. alpella</i>	5/3	11, 23
<i>Y. sylvella</i>	17/9	CDGHJ
<i>Y. parenthesesella</i>	124/48	BCEFGHINP
<i>Y. ustella</i>	4/4	11, 14, 34
<i>Y. sequella</i>	28/22	BCDFHIJK
<i>Y. vittella</i>	2/2	31, 61
Diamond-back Moth <i>Plutella xylostella</i>	431/177	ABCDEFGHIJNOP
<i>P. porrectella</i>	8/5	BCDIJ
Leek Moth <i>Acrolepiopsis assectella</i>	1/1	Portsmouth (VC11)
<i>Epermenia chaerophyllella</i>	1/1	Earith (VC31)
Large Clover Case-bearer <i>Coleophora trifolii</i>	2/2	11
<i>C. alcyonipennella</i>	1/1	Jersey (VC113)
<i>C. alcyonipennella/frischella</i> agg.	2/2	11, 38
<i>C. taeniipennella</i>	1/1	Lower Woods (VC34)
<i>Elachista atricomella</i>	1/1	Aylesham (VC15)
<i>E. humilis</i>	1/1	Old Weston (VC31)
<i>E. canapennella</i>	11/9	BCDEFIP
<i>E. maculicerusella</i>	1/1	Earith (VC31)
<i>Cosmiotes consortella</i>	1/1	Sherborne St John (VC12)
<i>B. lunaris</i>	2/2	1, 36
<i>B. unitella</i>	1/1	Old Weston (VC31)
Brown House Moth <i>Hofmannophila pseudospretella</i>	35/30	ABCDEFGHIJ
White-shouldered House Moth <i>Endrosia sarcitrella</i>	125/85	ABCDEFGHIJKNP
<i>Tachystola acroxantha</i>	75/27	BCDFI
<i>Carcina quercana</i>	37/30	ABCDEFPP
<i>Depressaria daucella</i>	1/1	Gower (VC41)
Parsnip Moth <i>D. heraclei</i>	10/6	CDNO
<i>D. badiella</i>	306/4	15, 17, 61
<i>Agonopterix heracliana</i>	18/13	BCDEFGJN
<i>A. subpropinquella</i>	1/1	Walditch (VC9)
<i>A. alstromeriana</i>	5/4	7, 18, 31
<i>A. arenella</i>	61/45	BCDEFGHIJP
<i>A. kaekeritziana</i>	1/1	Rothamsted (VC20)
<i>A. pallorella</i>	1/1	Beachy Head (VC14)
<i>A. ocellana</i>	3/3	15, 94, H20

<i>A. assimilella</i>	1/1	Lower Woods (VC34)
<i>A. scopariella</i>	1/1	Dungeness (VC15)
<i>A. umbellana</i>	12/8	BCDGI
<i>A. nervosa</i>	15/12	CDIN
<i>A. carduella</i>	1/1	Port Mulgrave (VC62)
<i>A. rotundella</i>	3/1	Brixham (VC3)
<i>Eulamprotes atrella</i>	1/1	Sandy Point (VC11)
<i>Monochroa palustrella</i>	2/2	25, 31
<i>Carpatolechchia decorella</i>	1/1	Broadholme (VC56)
<i>Teleiopsis diffinis</i>	465/6	CD
<i>Mirificarma mulinella</i>	4/3	1, 14, 38
<i>Aroga velocella</i>	1/1	Mashbury (VC19)
<i>Scrobipalpa suaedella</i>	12/1	RSPB: Old Hall Marshes (VC19)
<i>S. costella</i>	4/4	11, 15, 25, 44
<i>Caryocolum marmoreum</i>	3/1	Bawdsey Manor (VC25)
<i>Aproaerema anthyllidella</i>	3/3	11, 25, 31
<i>Anacampsis blattariella</i>	1/1	Waingroves Wood (VC57)
<i>Hypatima rhomboidella</i>	34/16	BCDEFGIP
<i>Helcystogramma rufescens</i>	7/6	BDP
<i>Blastobasis vittata</i>	1/1	Sandy Point (VC11)
<i>B. adustella</i>	156/75	ABCDEFGHJNP
<i>B. lacticolella</i>	39/27	BCDIJNP
<i>Mompha locupletella</i>	2/2	41, 60
<i>M. raschkiella</i>	1/1	Todmorden (VC63)
<i>M. jurassicella</i>	2/2	31
<i>M. subbistrigella</i>	2/2	16, 25
<i>M. epilobiella</i>	8/4	13, 15, 25
<i>Cosmopterix pulchrimella</i>	6/3	113
<i>Aethes smeathmanniana</i>	2/2	16, 31
<i>Eupoecilia angustana</i>	6/5	ABG
<i>Cochylis dubitana</i>	1/1	RSPB: Bromhey Farm (VC16)
<i>C. hybridella</i>	2/2	21, 31
<i>C. atricapitana</i>	5/5	CDJ
Chequered Fruit-tree Tortrix <i>Pandemis corylana</i>	16/13	BCDHP
Barred Fruit-tree Tortrix <i>Pandemis cerasana</i>	20/14	BCDFGI
<i>P. cinnamomeana</i>	23/13	BCGHI
Dark Fruit-tree Tortrix <i>Pandemis heparana</i>	15/10	ABCDIJ
<i>Argyrotaenia ljugiana</i>	2/2	19
Large Fruit-tree Tortrix <i>Archips podana</i>	66/55	ABCDEFGJ
Variiegated Golden Tortrix <i>A. xylosteana</i>	7/5	BCJ
Rose Tortrix <i>A. rosana</i>	5/4	50, 53, 56
Carnation Tortrix <i>Cacoecimorpha pronubana</i>	13/11	BCDEI
Cyclamen Tortrix <i>Clepsis spectrana</i>	4/4	41, 56, 60
<i>Clepsis consimilana</i>	25/24	ACD

Light Brown Apple Moth <i>Epiphyas postvittana</i>	2836/512	ABCDEFGHIJKNP
Red-barred Tortrix <i>Ditula angustiorana</i>	1/1	Middleton Hall (VC38)
<i>Pseudargyrotoza conwagana</i>	5/5	BCJ
<i>Olindia schumacherana</i>	1/1	Tolpuddle Manor (VC9)
Light Grey Tortrix <i>Cnephasia incertana</i>	2/2	27
<i>Aleimma loeflingiana</i>	1/1	Rayleigh (VC18)
<i>Acleris laterana</i>	147/64	BCDEFGHIJNP
<i>A. laterana/comariana</i> agg.	82/36	BCEFHJKP
Strawberry Tortrix <i>Acleris comariana</i>	26/16	BFGHIJK
<i>A. sparsana</i>	80/49	ABCDEFGHIJKMN
Rhomboid Tortrix <i>A. rhombana</i>	91/48	BCDEFGIJKP
<i>A. ferrugana</i>	3/3	31, 32, 36
<i>A. ferrugana/notana</i> agg.	1/1	Flamborough Head (VC61)
<i>A. notana</i>	4/4	1, 34, 36, 81
<i>A. schalleriana</i>	1/1	Aylesham (VC15)
Garden Rose Tortrix <i>A. variegana</i>	516/260	ABCDEFGHIJKNP
<i>A. permutana</i>	6/1	Dungeness (VC15)
<i>A. logiana</i>	1/1	Linwood Warren (VC54)
<i>A. hastiana</i>	2/2	15, 24
<i>A. cristana</i>	10/9	BCDE
<i>A. rufana</i>	1/1	Ravenhead (VC56)
<i>A. literana</i>	1/1	Shebbear (VC4)
<i>A. emargana</i>	171/67	BCDEFGHIJMNP
<i>Celypha striana</i>	2/2	38, 58
<i>C. cespitana</i>	4/3	15, 113
<i>C. lacunana</i>	146/78	ABCDEFGHIJP
Plum Tortrix <i>Hedya pruniana</i>	3/1	Canvey Island (VC18)
<i>Apotomis betuletana</i>	9/8	CDEF
<i>Endothenia gentianaeana</i>	4/2	17, 32
<i>E. marginana</i>	1/1	Newhaven (VC14)
<i>E. ericetana</i>	1/1	Icklesham (VC14)
<i>E. quadrimaculana</i>	5/4	19, 28, 31, 111
<i>Lobesia liitoralalis</i>	4/4	15, 58, 67
<i>Bactra lancealana</i>	13/9	BCEGP
<i>B. lancealana/lacteana</i> agg.	1/1	Walditch (VC9)
<i>Epinotia bilunana</i>	1/1	Brixham (VC3)
<i>E. ramella</i>	35/24	CDEFGINP
<i>E. immundana</i>	9/7	BCFI
<i>E. nisella</i>	50/27	ABCDEFGINP
Nut Bud Moth <i>E. tenerana</i>	15/12	BCDFI
<i>E. trigonella</i>	3/3	24, 54, 85
<i>E. maculana</i>	1/1	Ryton Meadows (VC38)
<i>E. caprana</i>	8/4	15, 32, 111, H20
<i>E. solandriana</i>	1/1	Orles Wood (VC34)

<i>Crociosema plebejana</i>	15/12	ABCD
Holly Tortrix <i>Rhopobota naevana</i>	1/1	Elton (VC58)
<i>Zeiraphera isertana</i>	2/2	31, 42
<i>Gypsonoma dealbana</i>	1/1	The Bourne (VC17)
Bramble Shoot Moth <i>Epiblema uddmanniana</i>	8/6	CFI
<i>Eucosma cana</i>	3/3	10, 11, 14
Bud Moth <i>Spilonota ocellana</i>	1/1	Ashby-de-la-Zouch (VC55)
Pine Leaf-mining Moth <i>Clavigesta purdeyi</i>	1/1	Ferring (VC13)
<i>Cydia ulicetana</i>	3/3	1, 11, 25
<i>C. splendana</i>	3/3	25, 34
<i>Dichrorampha acuminatana</i>	1/1	Southsea (VC11)
Twenty-plume Moth <i>Alucita hexadactyla</i>	21/16	ABCDGHIJK
<i>Calamotropha paludella</i>	2/2	11, 38
<i>Agriphila tristella</i>	7/5	ACF
<i>A. inquinatella</i>	54/6	AC
<i>A. latistria</i>	3/3	10
<i>A. geniculea</i>	74/42	ABCD
<i>Catoptria pinella</i>	1/1	Bawdsey Manor (VC25)
<i>C. falsella</i>	19/14	ABCDJ
<i>Pediasia contaminella</i>	23/7	ACD
<i>P. aridella</i>	1/1	Newington (VC15)
<i>Schoenobius gigantella</i>	1/1	Icklesham (VC14)
<i>Donacula forficella</i>	2/2	15, 31
Water Veneer <i>Acentria ephemerella</i>	134/5	CDF
<i>Scoparia ambigualis</i>	2/2	47, 60
<i>Eudonia pallida</i>	119/44	ABCD
<i>E. truncicolella</i>	3/3	11, 12, 23
<i>E. angustea</i>	232/141	ABCDEFGHIJKNP
<i>E. mercurella</i>	12/11	ABCDFIM
Brown China-mark <i>Elophila nymphaeata</i>	17/12	CEFGP
Ringed China-mark <i>Parapopynx stratiotata</i>	22/6	BCE
Small China-mark <i>Cataclysta lemnata</i>	11/8	CD
Garden Pebble <i>Evergestis forficalis</i>	13/8	ABCDF
<i>E. limbata</i>	1/1	Ferring (VC13)
<i>E. extimalis</i>	7/2	113
<i>Cynaeda dentalis</i>	1/1	Dungeness (VC15)
<i>Pyrausta aurata</i>	3/3	11, 22, 24
<i>P. purpuralis</i>	1/1	Brandon Marsh (VC38)
<i>P. despicata</i>	5/3	1, 19, 41
<i>Paratalanta hyalinalis</i>	2/2	15
European Corn Borer <i>Ostrinia nubilalis</i>	1/1	Christchurch (VC11)
<i>Ebulea crocealis</i>	8/7	BCJ
<i>Udea lutealis</i>	3/3	18, 61, 91
<i>U. prunalis</i>	1/1	Newington (VC15)

<b>Rusty-dot Pearl</b> <i>Udea ferrugalis</i>	95/26	ABCG
<b>Mecyna asinalis</b>	10/10	BCG
<b>Rush Veneer</b> <i>Nomophila noctuella</i>	421/163	ABCDEFGHIJOP
<b>Dolicharthria punctalis</b>	1/1	Guernsey (VC113)
<b>Mother of Pearl</b> <i>Pleuroptya ruralis</i>	13/12	ABCDEP
<b>Boxworm Moth</b> <i>Diaphania perspectalis</i>	1/1	Leigh-on-Sea (VC18)
<b>Gold Triangle</b> <i>Hypsopygia costalis</i>	63/54	BCDEFG
<b>Orthopygia glaucinalis</b>	45/39	ACDEFGJ
<b>Meal Moth</b> <i>Pyralis farinalis</i>	7/7	BCDEJ
<b>Wax Moth</b> <i>Galleria mellonella</i>	4/4	12, 14, 22, 27
<b>Bee Moth</b> <i>Aphomia sociella</i>	5/5	CDFI
<b>Acrobasis consociella</b>	2/2	25
<b>Oncocera semirubella</b>	4/2	15, 17
<b>Phycita roborella</b>	2/2	25, 113
<b>Dioryctria abietella</b>	3/2	11, 34
<b>D. sylvestrella</b>	1/1	Botley Wood (VC11)
<b>D. simplicella</b>	11/2	28, 56
<b>Nephopterix angustella</b>	2/2	9, 11
<b>Euzophera pinguis</b>	1/1	Uplyme (VC3)
<b>Ephestia parasitella</b>	3/2	113
<b>Indian Meal Moth</b> <i>Plodia interpunctella</i>	1/1	Orpington (VC16)
<b>Oxyptilus distans</b>	1/1	Dungeness (VC15)
<b>Amblyptilia acanthadactyla</b>	34/27	ABCDEGIJ
<b>A. punctidactyla</b>	6/6	BCH
<b>Platyptilia gonodactyla</b>	2/2	24, 61
<b>Stenoptilia millieridactyla</b>	1/1	Great Smeaton (VC62)
<b>S. bipunctidactyla</b>	15/3	6, 62, 112
<b>White Plume Moth</b> <i>Pterophorus pentadactyla</i>	1/1	Weybourne (VC27)
<b>Emmelina monodactyla</b>	224/114	ABCDEFGHIJKP
<b>Pale Eggar</b> <i>Trichiura crataegi</i>	1/1	Schiehallion (VC88)
<b>Grass Eggar</b> <i>Lasiocampa trifolii</i>	1/1	Guernsey (VC113)
<b>Drinker</b> <i>Euthrix potatoria</i>	1/1	Goonhilly Downs (VC1)
<b>Scalloped Hook-tip</b> <i>Falcaria lacertinaria</i>	1/1	Newport (VC35)
<b>Oak Hook-tip</b> <i>Watsonalla binaria</i>	35/30	ABCDG
<b>Barred Hook-tip</b> <i>W. cultraria</i>	1/1	Queenswood (VC33)
<b>Pebble Hook-tip</b> <i>Drepana falcataria</i>	2/2	11, 56
<b>Chinese Character</b> <i>Cilix glaucata</i>	3/3	22, 25, 31
<b>Peach Blossom</b> <i>Thyatira batis</i>	3/3	1, 41, 44
<b>Buff Arches</b> <i>Habrosyne pyritoides</i>	2/2	3, 25
<b>Common Lutestring</b> <i>Ochropacha duplaris</i>	1/1	Peasmarsh (VC14)
<b>Oak Lutestring</b> <i>Cymatophorima diluta</i>	237/49	CDF
<b>Grass Emerald</b> <i>Pseudoterpna pruinata</i>	1/1	Beachy Head (VC14)
<b>Blotched Emerald</b> <i>Comibaena bajularia</i>	2/2	31, 37
<b>Common Emerald</b> <i>Hemithea aestivaria</i>	1/1	Bridport (VC9)

Small Emerald <i>Hemistola chrysoprasaria</i>	10/3	6, 24
Birch Mocha <i>Cyclophora albipunctata</i>	2/2	13, 14
Blair's Mocha <i>C. pupillaria</i>	17/2	13, 113
Maiden's Blush <i>C. punctaria</i>	10/10	BCDG
Clay Triple-lines <i>C. linearia</i>	1/1	Monkswood Green (VC37)
Blood-vein <i>Timandra comae</i>	55/48	BCDEFGIJ
Mullein Wave <i>Scopula marginepunctata</i>	22/11	AB
Small Blood-vein <i>S. imitaria</i>	5/5	DEGIJ
Least Carpet <i>Idaea rusticata</i>	13/12	ABCD
Small Fan-footed Wave <i>I. biselata</i>	13/9	BCDEFG
Small Dusty Wave <i>I. seriata</i>	62/49	ABCDEFGHIK
Single-dotted Wave <i>I. dimidiata</i>	8/8	BCEIJP
Treble Brown Spot <i>I. trigeminata</i>	3/3	11, 15
Riband Wave <i>I. aversata</i>	12/11	BCDEH
Portland Ribbon Wave <i>I. degeneraria</i>	5/4	113
Plain Wave <i>I. straminata</i>	1/1	Bawsey Manor (VC25)
Oblique Carpet <i>Orthonama vittata</i>	4/1	Cabbragh Wetlands (VCH7)
Flame Carpet <i>Xanthorhoe designata</i>	60/37	BCEFGHIMP
Red Carpet <i>X. decoloraria</i>	1/1	Plockton (VC105)
Red Twin-spot Carpet <i>X. spadicearia</i>	6/6	AC
Red/Dark-barred Twin-spot Carpet agg. <i>X. spadicearia/ferrugata</i> agg.	1/1	Earith (VC31)
Dark-barred Twin-spot Carpet <i>X. ferrugata</i>	7/6	BCD
Garden Carpet <i>X. fluctuata</i>	487/316	ABCDEFGHIJKLMNP
Spanish Carpet <i>Scotopteryx peribolata</i>	3/2	113
Shaded Broad-bar <i>S. chenopodiata</i>	2/1	Canvey Island (VC18)
Common Carpet <i>Epirrhoe alternata</i>	50/36	BCDEFGIJ
Galium Carpet <i>E. galiata</i>	6/4	2, 14, 113, H12
Yellow Shell <i>Camptogramma bilineata</i>	15/13	BCDI
Grey Mountain Carpet <i>Entephria caesiata</i>	1/1	Middletown (VC47)
Mallow <i>Larentia clavaria</i>	75/48	BCDEFG
Purple Bar <i>Cosmorhoe ocellata</i>	31/26	ABC GHP
Striped Twin-spot Carpet <i>Nebula salicata</i>	2/1	Dob's Linn (VC72)
Chevron <i>Eulithis testata</i>	57/11	BCHNP
Northern Spinach <i>E. populata</i>	2/2	45, H27
Spinach <i>E. mellinata</i>	1/1	Bridport (VC9)
Barred Straw <i>E. pyraliata</i>	1/1	Needingworth (VC31)
Small Phoenix <i>Ecliptopera silaceata</i>	21/17	BCFGHIJN
Red-green Carpet <i>Chloroclysta siterata</i>	345/187	BCDEFGHIJKLMNP
Autumn Green Carpet <i>C. miata</i>	39/20	GHIJNP
Dark Marbled Carpet <i>C. citrata</i>	67/38	BCDEFGHJMNP
Common Marbled Carpet <i>C. truncata</i>	3889/869	ABCDEFGHIJKLMNP
Barred Yellow <i>Cidaria fulvata</i>	5/2	25, 64
Blue-bordered Carpet <i>Plemyria rubiginata</i>	3/2	43, 49
Pine Carpet <i>Thera firmata</i>	468/81	BCDEFGHIKMNP



Grey Pine Carpet <i>T. obeliscata</i>	620/170	BCDEFGHIJKNOP
Spruce Carpet <i>T. britannica</i>	309/147	BCDEFGHIJKMNP
Juniper Carpet <i>T. juniperata</i>	1/1	Kendal (VC69)
Cypress Carpet <i>T. cupressata</i>	8/7	BC
Green Carpet <i>Colostygia pectinataria</i>	791/301	ABCDEFGHIJKNP
July Highflyer <i>Hydriomena furcata</i>	78/25	GHIMNP
Slender-striped Rufous <i>Coenocalpe lapidata</i>	1/1	Glenloy (VC97)
Pretty Chalk Carpet <i>Melanthia procellata</i>	7/5	CG
Tissue <i>Triphosa dubitata</i>	1/1	Bradford-on-Avon (VC7)
November Moth <i>Epirrita dilutata</i>	1/1	Argory (VCH37)
November Moth agg. <i>E. dilutata</i> agg.	1/1	Royton (VC59)
Autumnal Moth <i>E. autumnata</i>	2/2	60, 86
Small Autumnal Moth <i>E. filigrammaria</i>	4/3	62, 64, 103
Twin-spot Carpet <i>Perizoma didymata</i>	1/1	Ordiquihill (VC94)
Foxglove Pug <i>Eupithecia pulchellata</i>	1/1	Machynlleth (VC47)
Lime-speck Pug <i>E. centaureata</i>	14/13	ACDE
Common Pug <i>E. vulgata</i>	1/1	Bucks Green (VC13)
White-spotted Pug <i>E. tripunctaria</i>	1/1	Biddenden (VC15)
Tawny Speckled Pug <i>E. icterata</i>	2/2	47, 55
Bordered Pug <i>E. succenturiata</i>	1/1	Sandtoft (VC54)
Narrow-winged Pug <i>E. nanata</i>	2/2	1, 22
Ash Pug <i>E. innotata</i> f. <i>fraxinata</i>	3/3	44, 61
Golden-rod Pug <i>E. virgaureata</i>	2/2	38
Juniper Pug <i>E. pusillata</i>	2/2	12, 95
Cypress Pug <i>E. phoeniceata</i>	67/39	ABCDFG
Channel Islands Pug <i>E. ultimaria</i>	3/3	14, 113
Larch Pug <i>E. lariciata</i>	1/1	Budby South Forest (VC56)
V-Pug <i>Chloroclystis v-ata</i>	4/4	2, 36, 41, 45
Double-striped Pug <i>Gymnoscelis rufifasciata</i>	109/71	ABCDEGHNOP
Streak <i>Chesias legatella</i>	18/5	N
Treble-bar <i>Aplocera plagiata</i>	38/24	BCDFGHINP
Lesser Treble-bar <i>A. efformata</i>	8/6	C
Yellow-barred Brindle <i>Acasis viretata</i>	6/5	ABC
Magpie Moth <i>Abraxas grossulariata</i>	2/2	1, H12
Clouded Magpie <i>A. sylvata</i>	1/1	Lynford Arboretum (VC28)
Clouded Border <i>Lomaspidis marginata</i>	1/1	Sturry (VC15)
Scorched Carpet <i>Ligdia adustata</i>	2/1	Yatton (VC6)
Latticed Heath <i>Chiasmia clathrata</i>	6/3	18, 38
Brimstone Moth <i>Opisthograptis luteolata</i>	1793/495	ABCDEFGHIJKMNOP
Bordered Beauty <i>Epione repandaria</i>	25/17	ABCDEFG
Lilac Beauty <i>Apeira syringaria</i>	3/3	6, 22, 31
Large Thorn <i>Ennomos autumnaria</i>	9/7	CDE
August Thorn <i>E. quercinaria</i>	59/24	BCFGLP
Canary-shouldered Thorn <i>E. alniaria</i>	505/230	ABCDEFGHIJKMNOP

Dusky Thorn <i>E. fuscantaria</i>	588/255	BCDEFGHIJ
September Thorn <i>E. erosaria</i>	34/20	BCFGHI
Early Thorn <i>Selenia dentaria</i>	2/2	47, 113
Scalloped Oak <i>Crocallis elinguaris</i>	1/1	Aylesham (VC15)
Swallow-tailed Moth <i>Ourapteryx sambucaria</i>	3/3	11
Feathered Thorn <i>Colotois pennaria</i>	15/15	CDEFIJN
Peppered Moth <i>Biston betularia</i>	5/2	9, 22
Scarce Umber <i>Agriopis aurantiaria</i>	1/1	Shotover (VC23)
Mottled Umber <i>Erannis defoliaria</i>	8/8	BCHI
Willow Beauty <i>Peribatodes rhomboidaria</i>	1164/393	ABCDEFGHIJ
Mottled Beauty <i>Alcis repandata</i>	16/8	BCDEJ
Dotted Carpet <i>A. jubata</i>	2/1	Crinan Wood (VC101)
Brussels Lace <i>Cleorodes lichenaria</i>	1/1	Berwick St James (VC8)
Engrailed <i>Ectropis bistortata</i>	35/24	BCDEG
Engrailed/Small Engrailed agg. <i>E. bistortata/crepuscularia</i> agg.	4/3	9, 17, 38
Common White Wave <i>Cabera pusaria</i>	2/2	21, 56
Common Wave <i>C. exanthemata</i>	2/2	16, 28
Clouded Silver <i>Lomographa temerata</i>	1/1	Bawdsey Manor (VC25)
Light Emerald <i>Campaea margaritata</i>	1189/387	ABCDEFGHIJN
Barred Red <i>Hylaea fasciaria</i>	8/7	ACDN
Annulet <i>Charissa obscurata</i>	2/2	1, 10
Yellow Belle <i>Semiaspilates ochrearia</i>	15/7	ACG
Convolvulus Hawk-moth <i>Agrius convolvuli</i>	19/14	ABCDG
Humming-bird Hawk-moth <i>Macroglossum stellatarum</i>	3/3	14, 27, 28
Sallow Kitten <i>Furcula furcula</i>	1/1	Marley Common (VC13)
Iron Prominent <i>Notodonta dromedarius</i>	1/1	Silent Valley (VC35)
Lesser Swallow Prominent <i>Pheosia gnoma</i>	1/1	Freshfield Dune Heath (VC59)
Pale Prominent <i>Pterostoma palpina</i>	1/1	St Leonards-on-Sea (VC14)
Figure of Eight <i>Diloba caeruleocephala</i>	8/7	CDFI
Vapourer <i>Orgyia antiqua</i>	32/30	BCDEFHIJNO
Yellow-tail <i>Euproctis similis</i>	6/3	18, 25, 31
Black Arches <i>Lymantria monacha</i>	1/1	Bochym (VC1)
Rosy Footman <i>Mitochrista miniata</i>	6/6	BCDG
Dingy Footman <i>Eilema griseola</i>	4/4	1, 14, 43
Hoary Footman <i>E. caniola</i>	8/3	17, 22, 113
Buff Footman <i>E. depressa</i>	2/2	13, 60
Common Footman <i>E. lurideola</i>	1/1	Lynford Arboretum (VC28)
Four-spotted Footman <i>Lithosia quadra</i>	38/17	ABC
White Ermine <i>Spilosoma lubricipeda</i>	1/1	Church Cove (VC1)
Buff Ermine <i>S. luteum</i>	5/5	BF
Ruby Tiger <i>Phragmatobia fuliginosa</i>	48/40	ABCDEFG
Kent Black Arches <i>Meganola albula</i>	3/3	14, 18, 25
Short-cloaked Moth <i>Nola cucullatella</i>	1/1	Abberton (VC18)
Square-spot Dart <i>Euxoa obelisca</i>	25/4	10, 45, 81

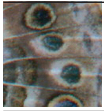
White-line Dart <i>E. tritici</i>	21/10	BCDI
Garden Dart <i>E. nigricans</i>	18/12	BCDGH
Archer's Dart <i>Agrotis vestigialis</i>	54/12	DGHP
Turnip Moth <i>A. segetum</i>	138/112	ABCDEFGHJQP
Heart and Club <i>A. clavis</i>	2/2	2, 13
Heart and Dart <i>A. exclamatonis</i>	30/19	ABCDEFGFH
Crescent Dart <i>A. trux</i>	83/7	AB
Dark Sword-grass <i>A. ipsilon</i>	94/74	ABCDEFGHJKNP
Shuttle-shaped Dart <i>A. puta</i>	641/254	ABCDEFGHJI
Flame <i>Axylla putris</i>	8/8	BCDG
Flame Shoulder <i>Ochropleura plecta</i>	205/133	ABCDEFGHJQP
Northern Rustic <i>Standfussiana lucernea</i>	1/1	Mewslade (VC41)
Large Yellow Underwing <i>Noctua pronuba</i>	14133/1108	ABCDEFGHJKLMNP
Lunar Yellow Underwing <i>N. orbona</i>	4/2	D
Lesser Yellow Underwing <i>N. comes</i>	3867/863	ABCDEFGHJKNOP
Broad-bordered Yellow Underwing <i>N. fimbriata</i>	891/340	ABCDEFGHJQP
Langmaid's Yellow Underwing <i>N. janthina</i>	1/1	Goodnestone Gardens (VC15)
Lesser Broad-bordered Yellow Underwing <i>N. janthe</i>	181/100	ABCDGFHINP
Least Yellow Underwing <i>N. interjecta</i>	18/12	ABCDGFIP
Autumnal Rustic <i>Eugnorisma glareosa</i>	898/205	BCDEFGHIJKMNOP
True Lover's Knot <i>Lycophotia porphyrea</i>	6/4	1, 41, 64, H38
Pearly Underwing <i>Peridroma saucia</i>	23/20	ABCDGP
Barred Chestnut <i>Diarsia dahlia</i>	1/1	Isle of Mull (VC103)
Small Square-spot <i>D. rubi</i>	584/219	ABCDEFGHIJMNOP
Setaceous Hebrew Character <i>Xestia c-nigrum</i>	13566/892	ABCDEFGHJKLMNP
Triple-spotted Clay <i>X. ditrapezium</i>	6/1	Cholsey (VC22)
Double Square-spot <i>X. triangulum</i>	1/1	Longmarsh View (VC16)
Dotted Clay <i>X. baja</i>	3/2	11, 13
Neglected Rustic <i>X. castanea</i>	53/19	BCGI
Six-striped Rustic <i>X. sexstrigata</i>	1/1	Sherborne St John (VC12)
Square-spot Rustic <i>X. xanthographa</i>	8218/787	ABCDEFGHJKLMNP
Heath Rustic <i>X. agathina</i>	49/20	ABCEFGHIJNP
Gothic <i>Naenia typica</i>	10/5	BCN
Nutmeg <i>Discestra trifolii</i>	4/4	1, 17, 25, 28
Cabbage Moth <i>Mamestra brassicae</i>	26/22	ABCDGJ
Dot Moth <i>Melanchra persicariae</i>	9/5	CD
Pale-shouldered Brocade <i>Lacanobia thalassina</i>	1/1	Ballough (VC71)
Dog's Tooth <i>L. suasa</i>	1/1	Orford Ness (VC25)
Bright-line Brown-eye <i>L. oleracea</i>	32/26	ABCD
Small Ranunculus <i>Hecatera dysodea</i>	1/1	Broadstairs (VC15)
Pod Lover <i>Hadena perplexa capsophila</i>	1/1	Church Cove (VC1)
Antler Moth <i>Cerapteryx graminis</i>	11/9	BDFIJNO
Hedge Rustic <i>Tholera cespitis</i>	34/18	BCDEGHN
Feathered Gothic <i>T. decimalis</i>	39/23	BCDEFGHJ

<b>Brown-line Bright Eye</b> <i>Mythimna conigera</i>	1/1	Ireland (VC30)
<b>Clay</b> <i>M. ferrago</i>	3/3	11
<b>White-point</b> <i>M. albipuncta</i>	131/67	ABCD
<b>Delicate</b> <i>M. vitellina</i>	9/9	ABD
<b>Southern Wainscot</b> <i>M. straminea</i>	1/1	RSPB: Fowlmere (VC29)
<b>Smoky Wainscot</b> <i>M. impura</i>	109/55	BCDEFGHIJP
<b>Common Wainscot</b> <i>M. pallens</i>	1125/396	ABCDEFGHIJKLP
<b>Mathew's Wainscot</b> <i>M. favicolor</i>	1/1	Bawdsey Manor (VC25)
<b>Shore Wainscot</b> <i>M. litoralis</i>	7/5	ADJ
<b>L-album Wainscot</b> <i>M. l-album</i>	657/142	ABCDG
<b>White-speck</b> <i>M. unipuncta</i>	3/2	1, 113
<b>Shoulder-striped Wainscot</b> <i>M. comma</i>	6/6	CG
<b>Wormwood</b> <i>Cucullia absinthii</i>	1/1	Perivale Wood (VC21)
<b>Minor Shoulder-knot</b> <i>Brachyomyia viminalis</i>	3/3	36, 72, 88
<b>Beautiful Gothic</b> <i>Leucochlaena oditis</i>	52/4	3, 9, 113
<b>Brindled Ochre</b> <i>Dasyptolia templi</i>	49/9	BNO
<b>Feathered Brindle</b> <i>Aporophyla australis</i>	82/11	BCD
<b>Deep-brown Dart</b> <i>A. lutulenta</i>	157/80	BCDEF
<b>Northern Deep-brown Dart</b> <i>A. lueneburgensis</i>	8/6	IJNP
<b>Black Rustic</b> <i>A. nigra</i>	1738/518	BCDEFGHIJLMNOP
<b>Golden-rod Brindle</b> <i>Lithomoia solidaginis</i>	1/1	Boat of Garten (VC95)
<b>Tawny Pinion</b> <i>Lithophane semibrunnea</i>	1/1	Astley Moss (VC59)
<b>Pale Pinion</b> <i>L. hepatica</i>	25/25	BCDEFGHIKP
<b>Grey Shoulder-knot</b> <i>L. ornitopus</i>	4/4	15, 21, 30, 54
<b>Blair's Shoulder-knot</b> <i>L. leautieri</i>	93/68	BCDEFGHIJK
<b>Red Sword-grass</b> <i>Xylena vetusta</i>	8/5	NO
<b>Green-brindled Crescent</b> <i>Allophyes oxyacanthae</i>	90/60	BCDEFGIJKMNOP
<b>Merveille du Jour</b> <i>Dichonia aprilina</i>	17/15	BDEGIJNO
<b>Brindled Green</b> <i>Dryobotodes eremita</i>	551/229	ABCDEFGHIJJP
<b>Sombre Brocade</b> <i>D. tenebrosa</i>	3/3	113
<b>Large Ranunculus</b> <i>Polymixis flavicincta</i>	269/147	ABCDEGJ
<b>Black-banded</b> <i>P. xanthomista</i>	9/4	1, 2
<b>Grey Chi</b> <i>Antitype chi</i>	9/8	GHINO
<b>Feathered Ranunculus</b> <i>Polymixis lichenea</i>	417/144	ABCDGIJLP
<b>Satellite</b> <i>Eupsilia transversa</i>	21/20	CDEFI
<b>Chestnut</b> <i>Conistra vaccinii</i>	23/18	ABCDGIJN
<b>Dark Chestnut</b> <i>C. ligula</i>	2/2	4, 24
<b>Brick</b> <i>Agrochola circellaris</i>	229/97	BCDEFGIJKN
<b>Red-line Quaker</b> <i>A. lota</i>	78/42	CDEFIJMNOP
<b>Yellow-line Quaker</b> <i>A. macilenta</i>	60/28	BCDEFIMNO
<b>Flounced Chestnut</b> <i>A. helvola</i>	73/26	BCDEFGHIJKNP
<b>Brown-spot Pinion</b> <i>A. litura</i>	324/143	BCDEFGHIJKMN
<b>Beaded Chestnut</b> <i>A. lychnidis</i>	344/135	BCDEFGHIJP
<b>Centre-barred Sallow</b> <i>Atethmia centrago</i>	456/229	ABCDEFGHIJKM

Lunar Underwing <i>Omphaloscelis lunosa</i>	7706/638	ABCDEFGHIJKLMNPO
Orange Sallow <i>Xanthia citrigo</i>	92/62	BCDEFI
Barred Sallow <i>X. aurago</i>	192/126	BCDEFGHIJ
Pink-barred Sallow <i>X. togata</i>	830/323	BCDEFGHIJKMNOP
Sallow <i>X. ictertia</i>	1083/289	BCDEFGHIJKMNOP
Dusky-lemon Sallow <i>X. gilvago</i>	29/17	CD
Pale-lemon Sallow <i>X. ocellaris</i>	1/1	Trumpington Orchard (VC29)
Poplar Grey <i>Acronicta megacephala</i>	2/2	15, 25
Grey Dagger <i>A. psi</i>	1/1	RSPB: Bromhey Farm (VC16)
Dark/Grey Dagger agg. <i>A. tridens/psi</i> agg.	3/3	14, 17, 33
Knot Grass <i>A. rumicis</i>	16/12	ABCDG
Reed Dagger <i>Simyra albovenosa</i>	1/1	Appledore (VC15)
Coronet <i>Craniophora ligustri</i>	1/1	Guernsey (VC113)
Marbled Beauty <i>Cryphia domestica</i>	34/26	BCDEFGI
Marbled Green <i>C. muralis</i>	8/8	ABG
Copper Underwing <i>Amphipyra pyramidea</i>	613/285	ABCDEFGHIJKP
Copper Underwing agg. <i>A. pyramidea</i> agg.	154/62	BCDEFGHIJ
Svensson's Copper Underwing <i>A. berbera</i>	176/85	BCDEFGHIJKN
Mouse Moth <i>A. tragopoginis</i>	104/60	CDEFGHIJKLNO
Old Lady <i>Mormo maura</i>	9/9	ACDGI
Straw Underwing <i>Thalophila matura</i>	7/6	ACD
Small Angle Shades <i>Euplexia lucipara</i>	9/9	BDGH
Angle Shades <i>Phlogophora meticulosa</i>	1284/526	ABCDEFGHIJKLMNPO
Olive <i>Ipimorpha subtusa</i>	1/1	Icklesham (VC14)
Angle-striped Sallow <i>Enargia paleacea</i>	23/6	EJ
Dun-bar <i>Cosmia trapezina</i>	12/7	BCGJ
Dark Arches <i>Apamea monoglypha</i>	97/51	BCDEFGHIJN
Rosy Minor <i>Mesoligia literosa</i>	6/2	67, 91
Common Rustic <i>Mesapamea secalis</i>	47/14	BCEGHNO
Lesser Common Rustic <i>M. didyma</i>	2/2	1, 13
Common Rustic agg. <i>M. secalis</i> agg.	24/24	ABCDGHIJN
Small Wainscot <i>Chortodes pygmina</i>	429/132	BCDEFGHIJKMNOP
Dusky Sallow <i>Eremobia ochroleuca</i>	1/1	Middleton Hall (VC38)
Flounced Rustic <i>Luperina testacea</i>	470/211	ABCDEFGHIJMN
Large Ear <i>Amphipoea lucens</i>	5/3	77, 88
Saltern Ear <i>A. fucosa</i>	1/1	Orford Ness (VC25)
Crinan Ear <i>A. crinanensis</i>	9/3	88, 97
Ear Moth <i>A. oculea</i>	30/8	BCN
Ear Moth agg. <i>A. oculea</i> agg.	15/9	IJKNO
Rosy Rustic <i>Hydraecia micacea</i>	1434/459	ABCDEFGHIJKLMNPO
Marsh Mallow Moth <i>H. osseola</i>	1/1	Romney Marsh (VC15)
Frosted Orange <i>Gortyna flavago</i>	1097/423	ABCDEFGHIJKLMNPO
Haworth's Minor <i>Celaena haworthii</i>	14/4	45, 63, 88
Crescent <i>C. leucostigma</i>	15/10	FNOP

<b>Bulrush Wainscot</b> <i>Nonagria typhae</i>	49/31	BCDEFGIJNP
<b>Twin-spotted Wainscot</b> <i>Archanaera geminipuncta</i>	2/1	Humberston Blowell (VC54)
<b>Webb's Wainscot</b> <i>A. sparganii</i>	8/6	CDE
<b>Large Wainscot</b> <i>Rhizedra lutosa</i>	208/101	BCDEFGIJMNOP
<b>Fen Wainscot</b> <i>Arenostola phragmitidis</i>	2/2	9, 15
<b>Treble Lines</b> <i>Charanyca trigrammica</i>	1/1	Bucks Green (VC13)
<b>Uncertain</b> <i>Hoplodrina alsines</i>	30/15	BCDE
<b>Rustic</b> <i>H. blanda</i>	20/15	BCDEFG
<b>Vine's Rustic</b> <i>H. ambigua</i>	393/171	ABCDEFGJ
<b>Small Mottled Willow</b> <i>Spodoptera exigua</i>	5/5	ABD
<b>Mottled Rustic</b> <i>Caradrina morpheus</i>	10/6	BCD
<b>Clancy's Rustic</b> <i>Platyperigea kadenii</i>	45/19	ACD
<b>Pale Mottled Willow</b> <i>Paradrina clavipalpis</i>	665/293	ABCDEFHGHIJK
<b>Anomalous</b> <i>Stilbia anomala</i>	20/8	BGHPN
<b>Bordered Sallow</b> <i>Pyrrhia umbra</i>	1/1	Porthcawl (VC41)
<b>Scarce Bordered Straw</b> <i>Helicoverpa armigera</i>	1/1	Bradwell-on-Sea (VC18)
<b>Bordered Straw</b> <i>Heliiothis peltigera</i>	3/3	1, 10, 15
<b>Marbled White Spot</b> <i>Protodeltote pygarga</i>	2/2	23, 28
<b>Oak Nycteoline</b> <i>Nycteola revayana</i>	12/11	CDFG
<b>Nut-tree Tussock</b> <i>Colocasia coryli</i>	1/1	Rowhill (VC17)
<b>Burnished Brass</b> <i>Diachrysa chrysitis</i>	413/228	ABCDEFGIJM
<b>Gold Spot</b> <i>Plusia festucae</i>	42/33	BCEGIOP
<b>Silver Y</b> <i>Autographa gamma</i>	1486/476	ABCDEFHGHIJKLMNP
<b>Beautiful Golden Y</b> <i>A. pulchrina</i>	6/3	40, 59, 62
<b>Dark Spectacle</b> <i>Abrostola triplasia</i>	39/28	ABCD
<b>Spectacle</b> <i>A. tripartita</i>	7/7	BDEI
<b>Clifden Nonpareil</b> <i>Catocala fraxini</i>	4/3	9, 10, 14
<b>Red Underwing</b> <i>C. nupta</i>	79/65	ABCDEFHGHIJK
<b>Herald</b> <i>Scoliopteryx libatrix</i>	10/8	ABCEGJN
<b>Beautiful Hook-tip</b> <i>Laspeyria flexula</i>	11/8	BCG
<b>Straw Dot</b> <i>Rivula sericealis</i>	385/207	ABCDEFGHIJP
<b>Snout</b> <i>Hypena proboscidalis</i>	2111/559	ABCDEFHGHIJKMN
<b>Bloxworth Snout</b> <i>H. obsitalis</i>	3/2	113
<b>Buttoned Snout</b> <i>H. rostralis</i>	4/4	15, 28, 113
<b>Pinion-streaked Snout</b> <i>Schrankia costaestrigalis</i>	160/78	ABCDFGHIP
<b>Plumed Fan-foot</b> <i>Pechipogo plumigeralis</i>	1/1	Ferring (VC13)
<b>Small Fan-foot</b> <i>Herminia grisealis</i>	2/2	34, 42

Mark Tunmore, Trewhella Cottage, Cury Cross Lanes, Helston, Cornwall, TR12 7AZ  
 Les Hill, Butterfly Conservation, Manor Yard, East Lulworth, Wareham, Dorset, BH20 5QP



## VIEWS AND REVIEWS

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***Butterflies of the Cayman Islands*** by R.R. Askew & P.A. van B. Stafford. Apollo Books, Stenstrup, Denmark, 2008. 169pp., six colour plates, full colour illustrations throughout, two black & white figures, end cover maps. Hbk. ISBN 978-87-88757-85-9. DKK 320

The Cayman Islands consist of three small islands (Grand Cayman, Little Cayman and Cayman Brac) of coral limestone south of Cuba, covering about 297km<sup>2</sup> and rising to a height of 43m. A total of 52 butterfly species have been recorded here, of which 34-39 are present at any one time. As the authors explain, there is a positive correlation between island area and butterfly numbers which can be shown by comparing the butterflies on the islands of the northern Caribbean, where for example Cuba and Hispaniola have a considerably larger butterfly fauna than the tiny Little Cayman. There are no endemic species—probably because of the frequency of hurricanes and the resulting wind-assisted inter-island butterfly movement (although five endemic subspecies have evolved here). The authors explain that butterflies seem to do well after hurricanes, perhaps partly due to the disappearance of small passerines.

The main part of this book is devoted to the species accounts. Each section begins with an account of each family: the Danaidae, Nymphalidae, Heliconiidae, Lycaenidae, Pieridae, Papilionidae and Hesperidae. Each species account has sections on recognition, the subspecies present, species range, island distribution, habitat, recording history from 1938 to the present, and biology. There is at least one photograph of a set specimen for each species to aid recognition, and for most species several photographs of living butterflies. Finally, there are lists of nectar plants and larval foodplants, notes on butterfly-like moths, and lists of butterflies which have featured on Cayman postage stamps. This is a delightful book, which is essential reading if visiting the Cayman Islands but worth buying for anyone generally interested in butterflies.

*Adrian Spalding*

***The Superorganism. The Beauty, Elegance, and Strangeness of Insect Societies*** by Bert Hölldobler & E.O. Wilson. W.W. Norton & Co., New York, 2009. 522pp., 70 colour plates, numerous black & white figures. Hbk. ISBN 978-0-393-06704-0. Price £35.

Hölldobler and Wilson won the Pulitzer General Nonfiction Prize for their previous major collaboration called *The Ants*, published in 1990. *The Superorganism* examines the remarkable increase in knowledge about social insects (ants, honeybees, wasps and termites) over the last 20 years. The authors explain that although social insects represent only 2% of the known 900,000 insect species they compose more than half the biomass. They consider that the superorganism is one step up from the organism in the hierarchy of biological organization. They suggest that social insects take possession of the larger and longer lasting spaces in the environment, pushing out solitary insects to the more peripheral areas. It is also suggested that the study of superorganisms is important for the study of general biology.

The book is full of fascinating information, e.g. about the waggle dance of the honey bees, the necrophoric behaviour of ants, and the use by ants of pheromones (e.g. as an alarm signal). There are several superb photos, from close-ups of ant mandibles to a photograph of a mature nest of the leafcutter *Atta laevigata* nest in Brazil, excavated after 6 tons of cement and 8,000 litres of water had been poured into the nest to preserve its structure and so large that men can be seen walking around inside. Other photos are of casts made by Walter Tschinkel, who poured dental plaster or molten aluminium into ant nests in order to investigate their subterranean structure, producing intricate patterns of tunnels and chambers cast in metal. If you want to know about social insects, and particularly about ants, this is definitely the book for you.

*Adrian Spalding*

