

**PROCEEDINGS
of the
ISLE OF WIGHT
NATURAL HISTORY and
ARCHAEOLOGICAL SOCIETY**

VOL. 22

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ISLE OF WIGHT
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VOLUME 22

2006

ISLE OF WIGHT NATURAL HISTORY AND ARCHAEOLOGICAL SOCIETY

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ADDITIONAL RECORDS OF PLANT GALLS FROM THE ISLE OF WIGHT

Dr. D.T. Biggs

Since the publication of my last list of newly found gall-inducing organisms (Biggs 2006) nine new species have been recorded from the Island.

FUNGI

Ascomycota

Hypocreales

Epichloe clarkii White

Brian Spooner and S.L. Kemp wrote an article in 'Mycologist' dividing the species *Epichloe typhina* into six species. In Swanton's List of I.W. Fungi (1934) *Epichloe typhina* was considered to be of frequent occurrence. I have many records of it affecting and galling Creeping Soft-grass (*Holcus mollis*) and one on False Oat-grass (*Arrhenatherum elatius*). Bill Shepard and I came across a very large patch of Yorkshire Fog (*Holcus lanata*) on the cliff edge west of Whale Chine at SZ4678 on 17th July 2005 with almost every plant affected by 'Choke Disease'. The paper by Spooner and Kemp describes how the species of *Epichloe* can be identified and gives a table of host species. I was able to determine these specimens as *Epichloe clarkii* by microscopical examination of the ascospores. It appears that it is only *E. clarkii* that affects *Holcus mollis* and *H. lanata*, and *E. typhina* which affects *Arrhenatherum elatius*. Infected grasses are larger, more robust and vigorous but the fungus surrounds the grass stem, 'chokes' it and suppresses flowering.

Chytridiomycota

Blastocladales

Physoderma vagans Schroet.

This fungus is a member of the CHYTRIDIOMYCOTA. They are rather strange organisms not closely related to most other fungi and characterised by having motile reproductive cells each equipped with a single posterior flagellum. My wife found several plants of Creeping Buttercup (*Ranunculus repens*) galled by this fungus in our garden in Gurnard SZ476954 on 23rd May 2005. Many leaves showed scattered irregular upper-surface warts c. 0.5 mm. across. Microscopy showed thick-walled resting spores. Similar species are pests of Alfalfa *Medicago sativa* and Sugar Beet *Beta vulgaris*.

ACARI

Aceria fraxinicola (Nalepa)

At Hurst Stake SZ5090 on 25th July 2005 I found one gall of this mite on a leaflet of Ash (*Fraxinus excelsior*.) The gall was a pointed very dark green pustule 1.5 mm high and 2-3 mm across on the upper leaf surface, and surrounded by a pale yellow patch 8 mm in diameter. It was situated on one of the side veins and on sectioning an irregularly divided cavity was revealed containing mites.

Eriophyes canestrinii (Nalepa)

This gall mite causes phyllanthly of the flowers of Box (*Buxus sempervirens*.) I found three deformed fruits on a bush at Langbridge, Newchurch SZ5585 on 9th November 2005. The abnormal fruits were brown and thickened and contained thick fleshy stamens and stigmas with small cavities within them containing the mites. Unusually for a mite-induced flower gall there was no abnormal pilosity.

ADDITIONAL RECORDS OF PLANT GALLS FROM IOW

Phyllocoptes gibbosus (Nalepa)

This mite gall was found in Firestone Copse SZ5591 on 13th March 2005 by myself. It occurs on Bramble (*Rubus fruticosus*) and is an erineum on the leaf. An erineum is a patch of abnormal hairs which the mite induces the leaf to produce. This particular erineum had been produced the previous season. One leaf had a very noticeable greyish white felt extending from the midrib to the edge of the leaf on one side. Some individual hairs were colourless and some were white and they were so thickly growing that a curious iridescent appearance was given similar to 'watered' silk. On microscopy each hair was seen to be very slender and to have an acutely pointed tip.

Phytoptus tetratrichus (Nalepa)

A tree of Lime (*Tilia x europaea*) at Freshwater SZ3387 was found by me on 18th October 2005 to exhibit multiple upper-surface leaf pustules, 3 mm across and 1.5 mm high and brown in colour. On the under-surface of the leaf were corresponding deep concavities filled to overflowing with long coiled and twisted beige hairs, particularly thick on the thickened rim of the concavity. As is usual the gall mites live amongst the hairs.

DIPTERA

Contarinia scrophulariae Kieffer, 1896

I found many old galled flowers of Water Figwort (*Scrophularia aquatica*) at Osborne SZ5295 on 12th April 2005. These were remaining on the plant from the previous growing season. At the time when the galls had been mature, the flowers would have remained closed and the internal floral parts would have been thickened. Each flower would have contained several white to citrus yellow jumping larvae. By the time I came across the galls the flowers were thickened and brown. Sectioning revealed greatly thickened stamens and stigmas with shallow depressions in them where the larvae had fed.

Jaapiella schmidtii Rübisaamen, 1912

On Ribwort Plantain (*Plantago lanceolata*) at Shalfleet SZ4190 on 7th September 2005. One inflorescence of one plant attracted my attention because it was much thicker than normal, shorter, and bent over at the apex. Closer examination revealed some 20 abnormal fruits, shiny brown, smooth, and distinctly and very noticeably pointed. A hand lens revealed some to have an exit hole. Microscopy at home yielded bright orange-red larvae.

HEMIPTERA

Adelges laricis Vallot, 1836

Sue Blackwell found one gall in Snowdrop Lane in Gatcombe SZ4885 on 24th February 2005. The gall was an old one, from a previous year, on a fallen twig of Norway Spruce (*Picea abies*.) The gall-causer is an Adelgid, closely related to ordinary aphids and sometimes called woolly conifer aphids. They have a two-year life cycle which always involves a species of Spruce as the primary host plant. The secondary host of this species is Larch (*Larix sp.*). The gall looks like and is known as a pineapple gall. It consists of the swollen bases of adjacent needles which become fused to the axis of the shoot forming a compact globular structure which encloses the insects. It is yellowish or greenish-white at maturity, globular, about 10 mm x 10 mm, on one side of the tip of a shoot, with the openings from the gall chambers produced into pointed elongated processes.

ADDITIONAL RECORDS OF PLANT GALLS FROM IOW

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ARCHAEOLOGY OF THE SOMERTON FARM TO KNIGHT'S CROSS GAS PIPELINE

Richard Moore

Introduction

Monitoring of construction work for a gas pipeline from Somerton Farm to Knight's Cross, during the spring and summer of 2000, led to the identification of twenty-six areas of archaeological interest. These included a former streambed containing worked timber, probably of Bronze Age date; pits and ditches from the Roman period; remnants of medieval ridge-and-furrow, and post-medieval drainage features. Concentrations of fire-cracked stone associated with scatters of worked flint were also recorded.

This paper gives a brief summary of the results. A full report (*Somerton Farm to Knight's Cross 300mm High Pressure Gas Pipeline, Archaeological Trial Trenching and Watching Brief 2000*, Network Archaeology Ltd Report no. 162, September 2005) is available in the Isle of Wight County Archaeological Service Sites and Monuments Record.

Results

Whippingham (SZ 5091 9363), possible Bronze Age timber.

A large linear feature seen in the side of the pipe-trench was probably an old stream channel. It contained a number of waterlogged oak timbers, the largest of which, an 85cm-long section of boxed heartwood, showed tool-marks consistent with it having been cut with a bronze socketed axe. This feature, and a small charcoal-filled pit nearby, also contained fragments of fire-cracked flints and a number of pieces of worked flint.

Padmore Farm (SZ 5162 9318), Prehistoric, Roman and Medieval finds.

Finds from this site spanned a wide range of periods, and included worked flint and Roman and medieval pottery. Trial trenching, carried out before construction work on the pipeline, revealed a number of ill-defined linear features and pits, one of which contained a flint scraper, probably of Neolithic date (fig 2.11). A group of inter-cutting features seen in the pipe-trench produced rimsherds of Durotrigian black burnished ware (fig 3.1) and of Vectis-ware (figs 3.2, 3.3) as well as a discoidal flint scraper (fig 2.10). Unstratified finds included a sherd of early to middle Bronze Age pottery, a Neolithic flint blade (fig 2.6) and a retouched flake (fig 2.5).

Bridlesford Lodge (SZ 5317 9009), Roman features.

This site had a small pit with heat-reddened sides, several small pits with charcoal fills and an isolated posthole. One of the pits contained the crushed remains of an almost complete brown Vectis-ware jar (fig 3.5) and substantial remains of a second jar in black Vectis-ware (fig 3.6). The rim forms of these vessels are not closely dateable, but are probably within the range AD 70 to 150. Other features produced further Vectis-ware rimsherds (figs 3.4, 3.7).

Evidence of Prehistoric Tree Clearance

In addition to three sites above, seven areas with small irregular features believed to be the remains of tree clearance, were identified. These pits were generally in areas with concentrations of fire-cracked flint and smaller quantities of worked flint. Unstratified finds from one of these areas near Somerton Farm (SZ 4960 9424) included an abraded flint core (fig 2.9) and a sherd of pottery of a fabric typical of Beaker period vessels from the Wessex region.

ARCHAEOLOGY OF THE SOMERTON FARM TO KNIGHT'S CROSS GAS PIPELINE

Another area associated with an old stream channel near Whippingham Church, (SZ 5111 9341) had a Neolithic core (fig 2.1) among other unstratified flint finds. Later ditches, cut through tree clearance pits at a site near Alverstone Farm (SZ 5212 9287), produced medieval pottery along with a Neolithic flint blade (fig 2.4). Unstratified finds here included a discoidal scraper (fig 2.12), a side or end scraper (fig 2.2) and a retouched flake or rough-out (fig 2.3). A small exhausted blade core (fig 2.8) came from a field adjacent to Palmers Lodge (SZ 5272 9196). The three other identified areas of tree clearance pits were centred at SZ 4997 9387, SZ 5051 9373 and SZ 5312 9023.

Flint Scatters

Pieces of fire-cracked flints were common throughout the pipeline route, but seemed to be especially clustered around streams or beds of former streams draining into the Medina River or into Palmer's Brook. These flints are not readily dateable, but appear to be typical of the material that makes up burnt mounds. Burnt mounds are not fully understood: they may be the detritus from cooking processes using pot-boilers, or from sauna-style bathing for personal hygiene or as part of a ritual ceremony. Dating of these features elsewhere in the country indicates that they were in use for a long period, but were particularly common in the Bronze Age.

The concentrations of fire-cracked stones seemed to coincide with scatters of worked flint, reinforcing the view that this material is of prehistoric origin. As an example, a small assemblage of surface finds from one of these areas (SZ 5194 9298) included a scraper of Neolithic or Bronze Age date (fig 2.7).

Medieval, Post-Medieval and Modern Features

The watching brief also recorded a former area of ridge-and-furrow cultivation near Calving Close Copse (SZ 4988 9400), former trackways (SZ 4939 9441, SZ 4944 9435, SZ 5244 9222, SZ 5308 9040), a nineteenth century rubbish dump (SZ 5308 9042) and brick culvert (SZ 5091 9364).

Conclusions

The investigations carried out as part of the pipeline construction programme have highlighted the archaeological potential of the area either side of the Medina River. Prehistoric activity, including that resulting in the formation of burnt mounds, seems to have occurred near to the streams draining the high ground on either side of the valley. The evidence associating spreads of fire-cracked flint with tree clearance features, together with the worked timber from the site at Whippingham, suggests that agricultural land was expanding into forested areas during the Bronze Age.

The two small, previously unknown sites at Padmore Farm and Briddlesford Lodge will add to the understanding of the development of the area during the Roman period, while the medieval and later finds provide evidence of its subsequent evolution as a rural, agricultural landscape.

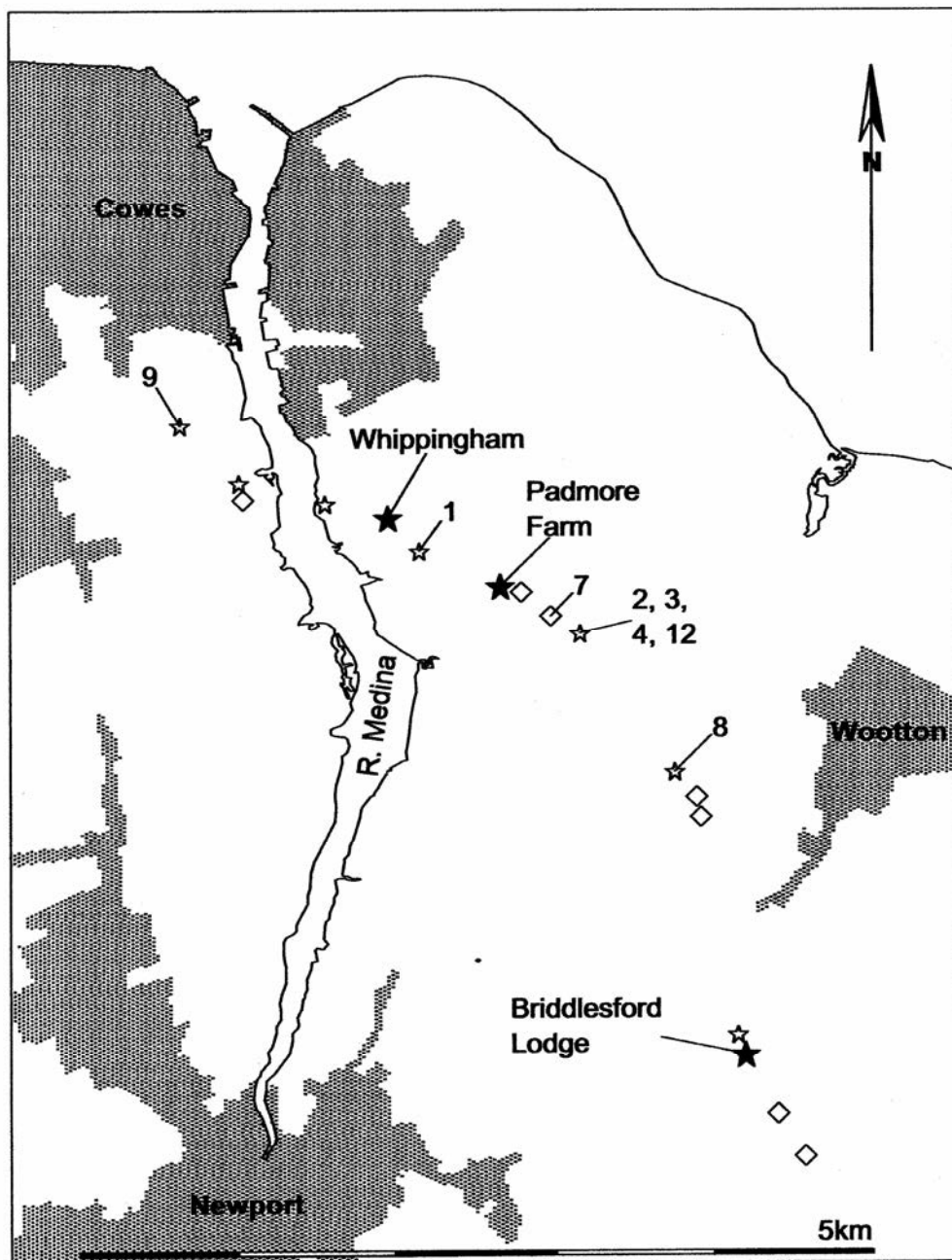
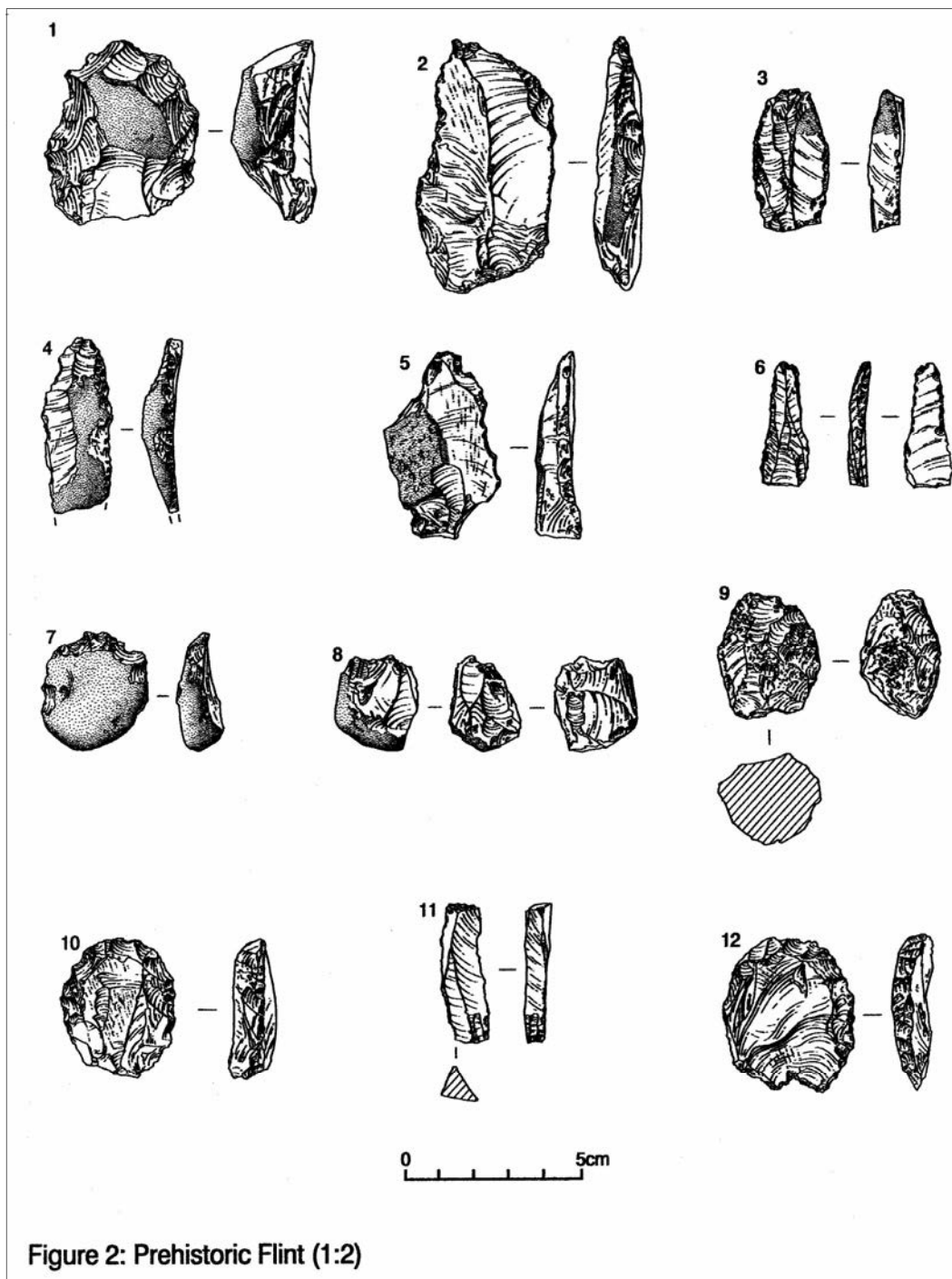


Figure 1: Location of sites

- ☆ Areas of tree clearance features and flint finds
- ◇ Scatters of struck flint and fire-cracked flint

Numbers refer to flint finds illustrated in Figure 2



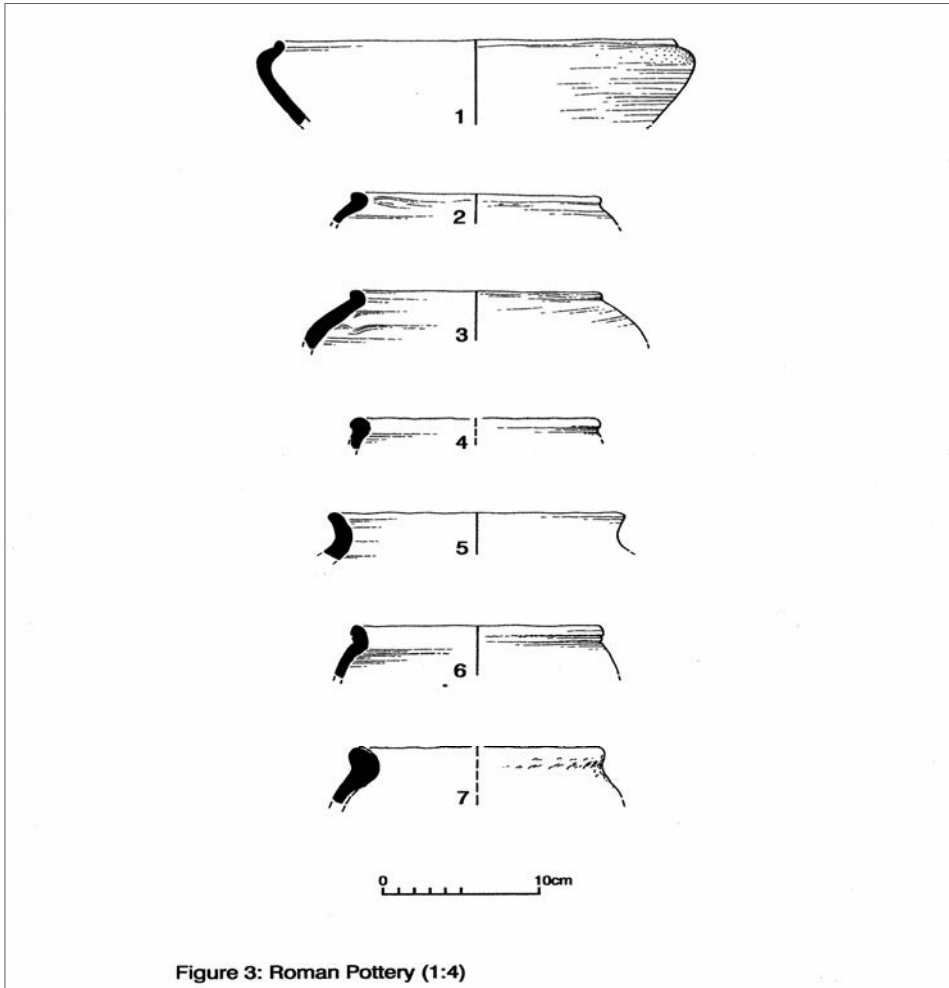


Figure 3: Roman Pottery (1-4)

Acknowledgements

This work was funded and facilitated by Transco, now part of National Grid. Thanks are also due to the main contractor for the pipeline's construction, Lawrence Engineering. Specialist contributors were: Elaine Morris (prehistoric pottery), Malcolm Lyne (Roman pottery), Alan Vince (medieval and post-medieval ceramic), Lynne Bevan (flint), Maisie Taylor (wood), Wendy Caruthers (plant remains), Rowena Gale (charcoal), Jill Reilly (brick) and Rob Scaife (pollen). Fieldwork was carried out by Andrew Hunn assisted by Adrian Hadley. The excavation report was written by Andrew Hunn and Claire Angus, and edited by Claire Lingard; other members of staff of Network Archaeology Ltd also contributed to finds processing and report production. Drawings (figs 2 and 3) are by Dave Hopkins of Archaeological Project Services. Finally, all the owners of land crossed by the pipeline are thanked for their co-operation and for donation of finds.

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BATS (CHIROPTERA) - 2005

Colin R. Pope

A total of fifteen different species were recorded in 2005, a record number and a reflection of the range of bat work carried out throughout the year. Twenty-six house roosts were counted by bat group members and householders. Graham and Donna Street's bat hospital was again kept busy throughout the year; they dealt with a total of 99 bats, slightly fewer than in 2004. Mist netting was again carried out by Ian Davidson-Watts, this year in Briddlesford Copse, Coombe Plantation (near Brook) and woodland along the Undercliff.

Bob Stebbings, a well known bat expert, was commissioned to carry out a bat survey of a small woodland area off Sylvan Avenue in East Cowes. This formed a part of an investigation into the ecological impacts of a proposed major redevelopment. He and his assistant spent a total of eight nights in June and July recording with time expansion bat detectors and mist netting, in addition to visual observations. His results revealed a remarkably diverse bat fauna in a small urban woodland. He recorded around eleven species including roosting Barbastelle, Pipistrelle and Long-eared Bat and the first Island records of Leisler's Bat.

The following bat species were recorded in 2005:

Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)

This rare species is evidently still surviving on in the Island, despite the fact that there were no records in 2004. A single individual was present in the Undercliff hibernaculum on 11 January (SC), but not seen here on 16 January. One was present in a traditional chimney roost at Carisbrooke Castle on 9 June. This was the first time it has been seen in this site since 2000.

A detailed bat survey carried out by Bob Stebbings in a small woodland in the middle of East Cowes recorded this species from visual observation and detector records. This was most unexpected. It was recorded on three visits during survey work in June and July, most likely the same individual on each occasion.

Daubenton's Bat (*Myotis daubentonii*)

One male was grounded at Newport Business Centre on 29 March. Two males were grounded in front of two shops in St James' Street, Newport, both on 31 August. One female was grounded in Cowes town centre.

An adult male was netted in woodland at St Lawrence on 21 August.

Whiskered/Brandt's Bat (*M. mystacinus / brandtii*)

One house roost, at Northwood, was monitored (ShC) with 17 counted on 7 June. Four taken in to the Bat Hospital during the year were all probably Whiskered Bats. There was one in Ventnor town centre; a female at Bembridge embankment; a female at East Cowes; and a female at Sandford.

Whiskered Bat (*M. mystacinus*)

A lactating female was caught in a mist net set up in Coombe Plantation on 29 July. See also above.

Brandt's Bat (*M. brandtii*)

A lactating female was caught in a mist net set up in Coombe Plantation on 29 July.

BATS (CHIROPTERA) - 2005

Natterer's Bat (*M. nattereri*)

One in the Shide Tunnel hibernaculum on 22 January.

Individual lactating females were caught in mist nets at Dunnage Copse (Bridlesford) on 7 July and in Coombe Plantation on 29 July. A female was found grounded at Cranmore in the summer.

Bechstein's Bat (*M. bechsteini*)

One found dead at Sibden Road, Shanklin in September and a male, badly injured, at Freshwater in the same month. An injured male at Harcourt Sands, Puckpool, on 17 November.

A period of mist netting and radio tracking in woods at Bridlesford during early July, led to the discovery of tree roosts in Six Acre Copse (33 counted out on 7 July) and Vicarage Copse (43 counted out on 3rd July). Both sites were old Great Spotted Woodpecker holes in ash trees.

An adult male was netted in woodland at St Lawrence on 21 August.

Noctule (*Nyctalus noctula*)

A male was grounded alongside of Havenstreet Railway Station on 16 March (CC) and subsequently released. In the late summer, a juvenile was found here which had allegedly fallen out of the loft.

An individual was seen emerging from a tree roost used by Bechstein's Bats in Six Acre Copse on 7 July.

Leisler's Bat (*Nyctalus leisleri*)

A detailed bat survey carried out by Bob Stebbings in a small woodland in the middle of East Cowes recorded this species from time-expansion detector records on 20 June and, whilst observing nesting birds at dawn on 15 April. There have been no previous records of this species from the Island which indicates that it must be rare but perhaps overlooked.

Serotine (*Eptesicus serotinus*)

Five roosts were monitored this year. The highest count was 38 on 10 June from Meadow Cottage, Adgestone (JR/JG). The bat hospital treated a female from Winford and a female from Afton.

Pipistrelle (*Pipistrellus pipistrellus* / *P. pygmaeus*)

A hibernation roost was discovered in the gap between the wall and the porch above the door of the chapel at Carisbrooke Castle on 22 January.

Nineteen house roosts were monitored this year. The highest peak count recorded was 294 on 17 June from a house roost at Cranmore. Other high counts were 131 on 14 June from a roost at Marks Corner; 105 on 14 June from a roost at Yafford; and 100 on 23 June from a roost at Hamstead. These numbers are exceptional; the majority of house roosts hold between 20 and 40 individuals.

Both sibling species of Pipistrelle bat are recorded from the Island. This year, an analysis of time-expansion bat recordings from Carisbrooke Castle and from ten x 50km road transects carried out between early May and late September, has shown that the overwhelming majority of Pipistrelle bat passes were attributable to *P. pipistrellus*.

Pipistrelles are by far our commonest bat; 75% of all bats taken in by the bat hospital during the year were Pipistrelles.

Nathusius' Pipistrelle (*P. nathusii*)

A detailed bat survey carried out by Bob Stebbings in a small woodland in the middle of East Cowes recorded this species from time-expansion detector records on 20 June.

BATS (CHIROPTERA) - 2005

Brown Long-eared Bat (*Plecotus auritus*)

Two roosts were monitored this year. The maximum count, as usual, from a house at Brook Hill, was 12 on 14 June.

Individuals were trapped in mist nets set up in Coombe Plantation, and Dunnage and Six Acre Copses at Briddlesford. Four individuals were taken into the bat hospital.

Grey Long-eared Bat (*P. austriacus*)

Six individuals were counted in the roofspace of the traditional summer roost site at Niton on 24 September. Two males were present in a temporary roost site at Brading wax works. A female was grounded at Shorwell.

Barbastelle (*Barbastella barbastellus*)

A non-lactating female was found grounded at Lugley Street in Newport on 11 June.

A detailed bat survey carried out by Bob Stebbings in a small woodland in the middle of East Cowes recorded this species from time-expansion detector records on 14 and 15 July. Their presence was confirmed and tracked down to a roost site in one of the veteran oaks in the wood, with a colony of at least seven individuals. This would suggest a nursery roost.

Two individuals were caught in mist nets set up in Briddlesford Copse, a male on 4 July and a pregnant female on 6 July.

Individuals were detected by analysis of time expansion calls at Coombe Plantation on 29 July and in woodland at St Lawrence on 21 August.

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Kevin Batchelor, Neil Brown, Catherine Chalkley, Simon Colenutt (SC), Sheila Cooper (ShC), Ian Davidson-Watts, Jo Davidson-Watts, Carol Flux, Jill & Dave Green, Margaret Jackson, Colin & Jillie Pope, John Ralph, Bob Stebbings, M. Webber. I am very grateful to Graham and Donna Street for details of bats treated at the bat hospital.

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A SMALL STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

Dr. D.T Biggs

Summary

Twenty-nine Rose Bedeguar galls caused by *Diplolepis rosae* (Linnaeus) were collected and the emergent insects identified. The results are discussed and compared with the results found in other British and European surveys.

Introduction

The study of plant galls does not only involve the identification of the various gall-inducers and the recording of their distribution. The larger plant galls contain whole communities of different insect species which are intimately inter-dependent, and the study of these insect communities can be an interesting exercise.

For example, the well-known Marble Gall on oak results from one female gall-wasp of the species *Andricus kollari* laying one egg into a developing bud. From the egg hatches one larva which initiates the formation of the gall within which eventually the larva pupates. From this in due course one adult gall-wasp emerges which bites its way out of the mature gall leaving a very obvious exit hole. Yet, by autumn or winter each Marble Gall examined will reveal numerous exit holes, often up to 20 – 25, not just the one caused by the gall-inducing wasp. There are 28 known species of inquiline and parasitoid insects which can inhabit marble galls as well as the gall-causer.

One of the galls which is particularly easy to study is the Robin's Pincushion or Rose Bedeguar gall found on wild roses especially Dog Rose *Rosa canina* and caused by the gall-wasp *Diplolepis rosae* (Hymenoptera; Cynipidae).

This gall has been much studied by British and European biologists and was recorded from the Isle of Wight in Morey (1909) by Claude Morley who described it as common here. Somewhat strangely E.W. Swanton (1937) described the gall from *Rosa rubiginosa*, giving Staplers and Mot-tistone as sites, whereas most authorities would suggest that *Rosa canina* is the most common rose host species (Randolph, 2005)

Dr. K.G. Blair retired to Freshwater in 1943 having been Deputy Keeper in the Department of Entomology at the British Museum (Natural History) in South Kensington. He had a particular interest in this gall and its inhabitants and published several papers on the subject (Blair, 1943, 1945, 1951).

As I have been recording the distribution of this gall on the Island since 1975 I decided to perform my own small study of the *Diplolepis rosae* gall and its inhabitants to compare my results with those of others in Britain and Europe, especially comparing them where possible with those of Blair.

Method

Twenty-nine galls were studied, 27 taken on 10 October 2001 from short plants of *Rosa canina* growing on downland turf on Brook Down at SZ391852 and two galls taken on 2 February 2002 from tall sucker growth of a *Rosa* cultivar from my garden in Gurnard at SZ476954.

Each gall was removed with secateurs and after cleaning with a dry artist's brush was placed in a sterile airtight numbered container together with a single crystal of thymol to inhibit mould growth.

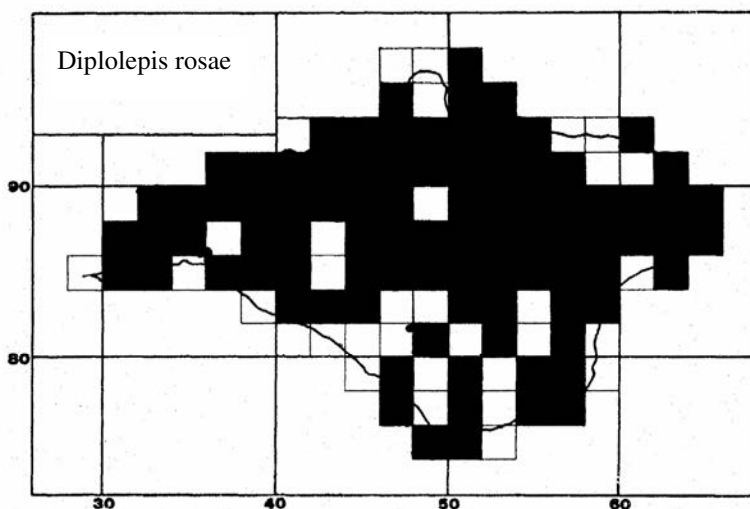
STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

The pots were examined regularly for emergent insects until 25 September 2005. They were kept throughout this time in an unheated garden outhouse protected from both frost and direct sunlight.

Results

The first insects to emerge during the period December 2001 to April 2002 were single individuals of three weevil species, *Polydrusus tereticollis*, *Polydrusus undatus* and *Sitona lineatus*. There was also a thrips species (Thysanoptera), a tick *Ixodes sp.* (Acarina) and an unidentified insect larva. None of these species is specific to Bedeguar galls but is simply an opportunistic inhabitant. From May 2002 to October 2002 however, many of the specialised *Diplolepis rosae* gall inhabitants emerged.

Current Distribution of *Diplolepis rosae* Galls on the Isle of Wight



Known Specialist Bedeguar Gall Inhabitants

HYMENOPTERA

CYNIPOIDEA

CYNIPIDAE

| | | |
|-----------------------------|--------------|--------|
| <i>Diplolepis rosae</i> | gall inducer | common |
| <i>Periclistus brandtii</i> | inquiline | common |

ICHNEUMONOIDEA

ICHNEUMONIDAE

| | | |
|----------------------------|---------------|--------|
| <i>Orthopelma mediator</i> | 1° parasitoid | common |
|----------------------------|---------------|--------|

CHALCIDOIDEA

EUPELMIDAE

| | | |
|------------------------------|---------------|-----------|
| <i>Aulogymsus skianeuros</i> | ? | very rare |
| <i>Eupelmus urozono</i> | 1° parasitoid | very rare |
| <i>Eupelmus vesicularis</i> | 1° parasitoid | rare |

STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

EURYTOMIDAE

Eurytoma rosae 1^o/2^o parasitoid uncommon

PTEROMALIDAE

Caenacis inflexa 1^o/2^o parasitoid occasional

Mesopolobus sericeus 1^o parasitoid very rare

Pteromalus bedeguaris 1^o/2^o parasitoid common

TORYMIDAE

Glyphomerus stigma 1^o parasitoid common

Torymus bedeguaris 1^o/2^o parasitoid common

Torymus rubi 1^o parasitoid rare

Of these species only five were recorded in this survey:

Diplolepis rosae

Periclistus brandtii

Orthopelma mediator

Pteromalus bedeguaris

Torymus bedeguaris

Diplolepis rosae (Linnaeus 1758)

HYMENOPTERA; CYNIPIDAE

This is a small Hymenopteran with an average body length of 3.8mm and dull in general aspect. The head is black and relatively small, with red eyes and black antennae which have 14 segments. The thorax is black and markedly arched, giving it a very 'hump-backed' appearance. The abdomen is relatively long and swollen, bright chestnut in colour and laterally compressed. The legs are brown.

The Bedeguar Gall is caused by the egg-laying actions of the female gall-wasp and the subsequent feeding activities of the developing larvae. This insect is parthenogenetic, laying her fertile eggs without having mated. Males of the species are rare. The eggs are laid into the leaf-buds or the apical bud of a shoot tip. Oviposition occurs from late April to mid-July and larval development goes on from May to October. The act of oviposition initiates the proliferation of the host plant tissues which then develop rapidly after the larva has emerged from the egg which occurs about a week after oviposition. As the larvae begin to feed, differentiation of the plant tissue results eventually in the formation of the mature gall which consists of separate larval chambers surrounding each larva, nutritive tissue on which the larvae feed and specialised vascular tissue connecting the interior of the gall with the normal vascular tree of the host plant's stem. The mechanical action of the larval jaws, enzymes in the larval saliva and chemicals liberated by the damaged host plant cells all play a part in this. The gall is fully developed in four to eight weeks.

The larvae remain in the gall over winter and pupation occurs in April. Emergence usually occurs from late-April to mid-August. Emergence of individual insects from a single gall is usually spread over some three weeks.

The hatched female insects probably only live for three to four days and start their own egg-laying as soon as they have hatched, very often on the same host plant from which they emerged. Females encountering the rare males seem to ignore them.

STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

Only 12 of my galls produced *Diplolepis rosae* adults:

| Pot 1 | 10f (female) |
|-------|--------------|
| 5 | 1f |
| 8 | 5f |
| 9 | 3f |
| 14 | 6f |
| 15 | 1f |
| 19 | 1f |
| 20 | 2f |
| 21 | 3f |
| 23 | 2f |
| 25 | 2f |
| 26 | 1f |

All these emergences occurred between 5 June 2002 and 28 July 2002.

The frequency of *Diplolepis rosae* across various European countries as a percentage of all emergent insects as recorded in a series of ten recent surveys (from 1967 to 1980) varied from 9.7% to 42.4%. In my small survey the figure was 9.5%.

Note that no males emerged. The percentage of males in eleven various European and British surveys between 1940 and 1973 ranged between 0.17% and 4.2% giving a sex ratio of males:females ranging from 1:600 to 1:24.

Blair (1943) stated that in observations over nearly 30 years he only came across the males once "in 1940 when two males and 102 females emerged from a large gall taken from near Carlisle."

Blair (1951) reported a small series of five galls taken from the downs near Freshwater. He dissected the galls and identified the larvae. He found respectively 51, 76, 155, 84 and 201 *Diplolepis rosae* larvae in these galls. Of the 119 gall-wasps which emerged, all were female.

Schroder (1967) hatched 2684 *Diplolepis rosae*, all female, from a large series of galls taken in Austria, France, Spain, Switzerland and southern Germany.

Periclistus brandtii (Ratzeburg 1832)

HYMENOPTERA; CYNIPIDAE

Noticeably smaller than *Diplolepis rosae* with an average body length of 2.7mm, it is very similar to that species in shape but has a shiny black abdomen, legs which are amber coloured, the male with the antennae amber also.

This is another Cynipid wasp but it is not a gall causer but an inquiline i.e. an inhabitant of the gall, dependent for its existence on the gall, using the gall tissue as its food and for its protection. The word 'inquiline' could be translated as 'lodger'.

Blair (1943) described this species as "an abundant inquiline, present in nearly all the galls sometimes to the exclusion of *Diplolepis rosae*."

Recent continental European surveys have shown it to represent between 7% and 37% of all insects emerging from Bedeguar galls. There is considerable variation in regional figures from Britain, ranging from 0.7% in Durham to 48% in Lancashire, with none in a series from Glamorgan.

A SMALL STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

In my small series I recorded it from only one specimen.

Pot 1 7 males and 6 females

This represents 3.3% of all emerged insects.

The presence of this inquiline seems to have no noticeable effect on the survival rate of the co-existing *Diplolepis rosae* larvae. Note that Pot 1 yielded 10 female *Diplolepis rosae* adults.

Periclistus brandtii is attacked by three Chalcids, *Glyphomerus stigma*, *Eurytoma rosae* and to a lesser extent by *Caenacis inflexa*.

P. brandtii has not been recorded before from the Island.

Orthopelma mediator (Thunberg 1822) HYMENOPTERA: ICHNEUMONIDAE

A relatively large insect for this gall community, the male has an average body length of 4.0mm and the female 4.6mm. It gives the impression of being long and 'gangly', with a black head and thorax, long dark antennae with 20-21 segments, an abdomen coloured a dirty yellowish-brown and dark yellow legs. It has a black waist between thorax and abdomen and the whole body is covered with straight white hairs.

This insect is a primary endoparasitoid in Bedeguar galls. A parasitoid is an insect, the larva of which consumes the tissues of living hosts, leading to their death. (Cf. a parasite, which ideally does not kill its host)

The adult female lays her eggs into the larvae of the gall-causer *Diplolepis rosae* (and perhaps also into the larvae of the inquiline *Periclistus brandtii*) within the gall by piercing the gall tissue with her ovipositor. The egg develops into a larva still inside the larva of *D. rosae* and slowly eats away the host larva's tissues from within. Such an insect is termed an endoparasitoid (Cf. an exoparasitoid which consumes a host larva from outside in.) A primary parasitoid attacks the gall-causer whereas a secondary, or hyper-parasitoid attacks the primary parasitoids themselves, killing them in turn. Tertiary parasitoids occur in some other gall communities.

Orthopelma mediator is the most common parasitoid to emerge from Bedeguar galls, ranging from 1% in the Pyrenees to 94% in Canada. Only three of my specimens did not yield *O. mediator*.

| | | | | | | | | |
|-------|----------|------------|----|-----|-----|----|-----|-----|
| Pot 1 | 12 males | 12 females | 11 | 0 m | 3f | 21 | 9m | 6f |
| 2 | 2m | 3f | 12 | 10m | 10f | 22 | 0m | 0f |
| 3 | 13m | 13f | 13 | 4m | 0f | 23 | 8m | 2f |
| 4 | 7m | 12f | 14 | 2m | 4f | 24 | 7m | 15f |
| 5 | 11m | 22f | 15 | 0m | 0f | 25 | 1m | 19f |
| 6 | 1m | 10f | 16 | 2m | 4f | 26 | 16m | 17f |
| 7 | 2m | 4f | 17 | 0m | 1f | 27 | 0m | 19f |
| 8 | 1m | 1f | 18 | 0m | 0f | 28 | 2m | 18f |
| 9 | 2m | 4f | 19 | 3m | 3f | 29 | 2m | 11f |
| 10 | 0m | 2f | 20 | 1m | 2f | | | |

There were 2 emergences in May, 60 in June, 234 in July, 13 in August and one in September. In my series *O. mediator* amounted to 79.5% of all emergent insects and 91% of all parasitoids. This insect was recorded by Claude Morley from Shalfleet (Morey, 1909). It is parasitised by *Pteromalus bedeguaris* which acts therefore as a secondary or hyper-parasitoid (Blair, 1943.)

Pteromalus bedeguaris (Thomson 1878) HYMENOPTERA; PTEROMALIDAE

This parasitoid is a small brightly coloured insect, the males averaging 2.5mm in length and the

STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

females 3.5mm. The head and thorax are a bright iridescent green or blue-green, with bronze tints. It has thick brassy antennae. The abdomen is golden/bronze in the male, shining purple in some lights; dark brown in the female. The legs are yellowish brown.

It acts mainly as a primary parasitoid of the gall-causer *Diplolepis rosae* but it can also be a secondary or hyper-parasitoid, attacking *Orthopelma mediator*, *Glyphomerus stigma* and *Torymus bedeguaris* (Redfern and Askew 1992).

In recent surveys *P. bedeguaris* has represented between 3% and 17.2% of all emerging insects and between 6.8% and 30.5% of all parasitoids.

In my survey, only four galls produced specimens of this insect:

| | |
|--------|--------------|
| Pot 7 | 2 f (female) |
| Pot 8 | 5f |
| Pot 9 | 1f |
| Pot 14 | 5f |

This represents 3.3% of all emergent insects and 3.8% of parasitoids.

Two emerged in May, eight in June and three in July.

There is no previous record of this insect on the Island.

Torymus bedeguaris (Linnaeus 1758)

HYMENOPTERA; TORYMIDAE

A primary ectoparasitoid, this is a brilliantly coloured insect 4mm in body length for the females and 3mm for the males. The head, thorax and abdomen are a glossy bronze as seen from the side and a bright metallic green from above. The antennae are dark and the legs are amber-coloured.

Blair considered this to be a “common” parasitoid of *Diplolepis rosae* but Askew (1960) found that occasionally it attacked the full-grown larvae of *Orthopelma mediator* as well.

Recent surveys have shown that the emergence period extends from early June to early September and that the insect accounts for from 4.2% to 22% of all emerged insects and from 6.1% to 32% of all parasitoids.

In my series this insect was hatched from seven galls:

| | |
|--------|-------------|
| Pot 9 | 4f (female) |
| Pot 14 | 4f |
| Pot 15 | 3f |
| Pot 21 | 2f |
| Pot 24 | 2f |
| Pot 26 | 1f |
| Pot 28 | 2f |

Of 18 insects, six emerged in July, 11 in August and one in September. This amounted to 4.6% of all emerged insects and 5.3% of parasitoids. This is apparently the first record of this insect from the Isle of Wight.

A SMALL STUDY OF THE ROSE BEDEGUAR GALL AND ITS INHABITANTS

Other Parasitoids Not Found

Aulogymnus skianeuros

There have only been two British records of this member of the Eupelmidae which only attacks *Diplolepis rosae* galls exceptionally. Its host within the gall is unknown.

Eupelmus urozonus

This is not confined to *Diplolepis rosae* but in one series (Askew 1980, 1984) it accounted for 0.9% of parasitoids, based on records of 11 males and 19 females from a single site.

Eupelmus vesicularis

So far there are no British records and in Europe it only attacks *Diplolepis rosae* exceptionally.

Eurytoma rosae

This is an uncommon ectoparasitoid of several species of *Diplolepis*, representing only 1% - 2% of emergent parasitoids from *Diplolepis rosae* galls. It mainly attacks the inquiline *Periclistus brandtii*, and less commonly *Diplolepis rosae*. Occasionally it acts as a hyperparasitoid, attacking *Torymus bedeguaris* (Redfern and Askew 1992).

Caenacis inflexa

This species is a hyperparasitoid of *Eurytoma rosae* and a primary parasitoid of *Periclistus brandtii*. Its average frequency as a percentage of all emerged parasitoids in England is 4.7%.

Mesopolobus sericeus

There are only three British records of this Pteromalid parasitising *Diplolepis rosae* galls, it usually being associated with Cynipid galls on oak.

Glyphomerus stigma

It is interesting that I did not record this insect in my series. In European studies it represents between 1.2% (Britain) and 28.4% of emergent insects and between 2.2% and 50% of parasitoids, respectively. Askew (1980) showed that in Britain where it is confined to southern England it accounted for 22% of all emerged parasitoids. Askew did not record it from Hampshire.

Blair (1943) stated that in Britain it was "perhaps somewhat local" having found it only in galls from Oxshott and Ashstead in Surrey, where it was "common enough". It is an ectoparasitoid on *Diplolepis rosae*, *Periclistus brandtii* and *Eurytoma rosae*.

Torymus rubi

Whereas this is a common parasitoid of *Diastrophus rubi* which causes a common and very obvious gall on Bramble (*Rubus fruticosus*) it only rarely parasitises *Diplolepis rosae*. Askew (1984) gives a figure of 0.36% of emerged parasitoids in Britain.

Late Emergences

I persisted in regularly examining my gall specimens for several years because sometimes there are late emergences in years 2 and 3 after collection but I did not hatch any identifiable Hymenoptera after the end of the first season following collection.

In January 2003 I noticed that a gall of the gall-wasp *Diplolepis mayri* had become obvious in Pot 9 growing adjacent to that of *Diplolepis rosae*.

In June 2003 Pot 28 yielded a White-shouldered House Moth (*Endrosis sarcitrella*), a common and widespread species.

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In November 2003 in Pot 3 was a dead Gelechiid moth which I could not identify. I do not know how the two moths came to be in the pots.

In 2004 there were no new hatchings.

In February 2005 the last insects emerged. They were Chalcid parasites but diseased and not identifiable.

Future Studies

I am repeating the above study with 25 *Diplolepis* galls taken from the same site at Brook Down on 17 November 2005 to see if I can confirm the above results or if I can record any other parasitoids.

Acknowledgements

I wish to thank Bill Shepard for identifying the weevils.

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BEMBRIDGE WINDMILL AND ITS MILLERS

Martin Light

Abstract

Bembridge Windmill has been ignored by windmill historians, but deserves much more attention as a survivor when so many of its contemporaries have disappeared. Recent research has brought to light many interesting documents about its history, and revealed its ownership for most of its active life. The names of many of those involved in working the mill have also been uncovered.

Bembridge is still a small community away from the major routes of the Isle of Wight. A large number of retired people have good local services and holiday makers swell the population in the summer. They come to camp and sail, and enjoy the local crabs and lobster. Two hundred and fifty years ago Bembridge was a much smaller community, fishing, smuggling and piloting vessels into Portsmouth and out of the Solent. There were about twenty farms, and the richest farmer was Henry Dennett of Forelands Farm.¹ Most of Bembridge was owned by Sir Richard Worsley, but by the 1770s there was one small area owned by his rich tenant, Henry Dennett. This was the land on which the windmill was already built. Dennett renewed his tenancy of Foreland Farm for 99 years in 1744-5.

There is uncertainty about when the mill was built. The earliest reference to a tower mill in England goes back to 1294², the earliest that has survived with its machinery within was built in 1632, probably to the design of Sir Edward Peyto.³ Like Bembridge, this has two pairs of stones driven off the spur wheel. Before 1700 the stone tower mills appear to have been considered expensive and few were built, these mainly through royal patronage.⁴ Smock mills (tower mills constructed in wood) were being built in the 17th century, and the one at Lacey Green in Buckinghamshire survives with its massive wooden machinery.⁵ This mill was moved to its present site in about 1814. One book claims that Bembridge mill was built around 1700 and was originally thatched, but the author has not revealed the source of this information.⁶ The present mill does not look as if it was once thatched as was claimed, and the layout of the machinery appears to be similar to that of other mid-century tower mills. The earliest evidence of the date of the mill comes from a rung of an old ladder that was removed during the restoration of 1959-1961, and on the underside was found the inscription E BEKER 1746 AC⁷. The name Baker is of a well-known local family, and the connection with the mill can only be guessed at. The 1740s would have been a good time to build a mill, with wars against France forcing grain prices up and

¹ See IWCRO/OG/II/2,4 for evidence that Henry Dennett was able to lend money in the 1730s and could afford to build a windmill. The only other wealthy farmer I have found is Robert Mackett, see IWCRO/OG/WA/31/92. There is no evidence of Worsley involvement in the windmill.

² Watts 2000 p.27. At Dover Castle.

³ Watts 2000 p.45

⁴ Watts 2000 p.48

⁵ Vince, *Discovering Windmills*, 1981 edition p.26

⁶ Anthony Triggs, *The Windmills of Hampshire* (1982) Mr Trigg told Ken Kirsopp that R.J. Brown's book *Windmills of England* was the source. See too the National Trust handbook.

⁷ After Christ

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providing the opportunity to sell flour to Britain's navy.⁸ 1746 is the year of the battle of Culloden, when Bonnie Prince Charlie's forces were defeated by the Hanoverian monarch's troops under the Duke of Cumberland.

In 1756 the windmill appears on the Taylor survey of the island and in 1762 on Bowen's map. The Worsley estate map of 1773⁹ does not mark the windmill, but indicates that the Worsleys did not own the land on which it was built. This must presumably have been sold by them at some time, although there is no record of this. The land is owned by Henry Dennett, and he and his descendants continued to own the mill for almost all its working life. In 1734 Henry Dennett, although only a tenant of the Worsleys, is described as a 'yeoman', and used a legacy to invest in a mortgage in the Westbrook mansion house. This money became available again in 1737.¹⁰ This suggests that Henry Dennett had the money to build the mill.

The local uniqueness of this mill is shown by the absence of any other known tower mills in Hampshire until around 1780¹¹, when further wars against France encouraged government sponsored mill construction. From 1770-1775 the mill and the house were tenanted by Mr Weight¹².

In the Salisbury Journal of 11th October 1779 the following advertisement appeared:

"MILLS. To be SOLD by AUCTION, on Thursday the 14th day of October instant, at the house of George Granger the sign of the Row Boat on Bembridge Point, in the parish of Brading, in the Isle of Wight. All that well-known WIND-MILL with two pair of stones advantageously situated in Bembridge, with a dwelling-house, stable and about one acre of exceedingly good land. The above premises are held by exceedingly good life aged thirty-seven years:- N.B. the sale to begin at two o'clock."

The dwelling house continued in use into the 19th century, but has now disappeared. Ideally it would not be built near the mill as this would affect the wind. This attempt to sell was probably prompted by the construction of the tide mill at St Helens (1780). It confirms that at this early date the mill already possessed two stones. The sale seems to have been a failure, as the Dennetts continued as owners. A further advertisement appeared in 1783:

Salisbury Journal 7th April 1783: *"ISLE OF WIGHT, To be LETT, and entered on immediately, a large Stone-built WIND-MILL; consisting of two pair of stones and two dressing-mills, with a good house and garden, and a paddock of land, situate at Bembridge, in the Parish of Brading, near St Helen's harbour, very convenient for shipping off flour, &c. For particulars apply to Henry Dennett, of Foreland."*

This advertisement is really valuable for us. It confirms the ownership of the mill is in the Dennetts' hands (this Henry is the son of the Henry Dennett (died in 1761) who probably paid for

⁸ See the advertisement for the mill in 1783.

⁹ IWCRO/JER/WA/33/49 Commissioned in 1773, produced 1774.

¹⁰ IWCRO/OG/1/4

¹¹ See A brief illustrated Gazetteer of Hampshire's Windpowered Grain Mills, c. 1750 to the present

¹² IWCRO/BRA/APR/1A/1, and IWCRO/BRA/APR/2A/1

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its construction). Millers frequently travelled around from mill to mill, looking to improve their income. John Kent seems to have been the miller who took up this opportunity, and a John Kent is still paying the rent in 1813. However, Henry Dennett's account book of 1782¹³ shows that Kent was the miller before this advertisement was placed. Why the mill was being advertised is therefore something of a puzzle. Perhaps Kent wanted to get away from the island but was persuaded to change his mind. He had other farming interests in Bembridge, as we shall see. In Scotland, Andrew Meikle took out a patent on a dressing machine in 1768, but further south John Milne took out patents for flour dressing machinery in 1765 and 1771. It is unlikely that the present 'wire machines' in the mill go back as far as this, but it is significant that the flour is being cleaned before sale by mechanical means as early as 1783. The auxiliary drive shaft has metal cogs, so is later than the original building.

In the Island Record office there is an important record of Henry Dennett's accounts from 1782 to 1795. The items relating to the mill and its working have been abstracted. The order of events in the original has been retained, so the list is not strictly chronological.

Henry Dennett's account book¹⁴ 1782

Paid

| | |
|--|----------|
| Paid for repairing the Mill Mr Boards Bill | 59- 2- 4 |
| John Newnham carrying | 5- 5- 0 |
| Mr Tinnolas Deal Timber | 3- 0- 0 |
| Three Tun of oak | 7-10- 0 |
| Wm Perkins for carrying | 2- 2- 0 |
| For Elm Timber | 1-10- 6 |
| Mr Wilkinsons Bill | 22- 6- 6 |
| Mr Bob Millers Bill | 19-16- 0 |
| Mr Wm Clarke for a Round Beam for the Mill | 4- 6- 0 |

Received

| | |
|---|----------|
| 26 Jan 1782 Mr John Way Kent | 2- 2- 0 |
| Nine loads of wheat at 12-10 | 22-10- 0 |
| 12 Jan 1784 John Kent for the Mill and field due 21 Dec 1784 | 21- 0- 0 |
| 14 March 1788; 12 March 1787; Feb 20 1788 John Kent for the Mill | 21- 0- 0 |
| And Orchard | 1-11- 6 |
| 2 March 1789 John Kent Rent for the Mill | |
| Due St Thos Day Last | 21-10- 0 |
| Ditto for new Mill Stones | 1-16- 0 |
| Ditto for a years rent for the Orchard | |
| Due M aforesaid | 2- 2- 0 |
| 12 April 1790 a years rent | |

¹³ see below

¹⁴ IWCRO/82/168

BEMBRIDGE WINDMILL AND ITS MILLERS

| | |
|---|-----------|
| for the mill due St Thos | 22-16-10 |
| Ditto for the Orchard due Michaelmas last | 1-11- 6 |
| 12 April 1790 John Keats Bill | 5-19- 6 |
| Ditto for Timber for Repairing the Mill | 3-13- 6 |
| 15 April 1791 John Kent a years Rent | |
| For the Mill & Orchard | 25- 0- 0 |
| 29 July 1795 John Kent for mill | 25- 0- 0 |
| and Orchard | 1-11- 6 |
| 12 Jun 1793 John Kent Bill for grinding | |
| Grist & Timber for the Mill | 8- 6-10 |
| | |
| Paid | |
| June 23 1787 Mr Board for Millstones | 18- 0 - 0 |

These records show the high cost of maintaining and operating a windmill. Despite these repairs a painting shows the mill operating in 1795 on only two sails, with a third lying on the ground in urgent need of repair or replacement. Most of the mill machinery today is made of oak, so the use of elm and deal is interesting. The cost and the volume of the oak is impressive. The cost of the mill stones in 1789 is ridiculously cheap. Good quality stones from France could cost over £40 elsewhere, so even after including the £18 for 1787 they seem cheap. As stones could last up to 40 years, it seems likely that both payments refer to the same set of stones. It would be nice to think that one of these is the stone later used to fill a muddy patch by the main entrance to the mill and still there today.

Bembridge is extremely fortunate to have a painting of the mill dating back to 1795.¹⁵ In that year J.M.W. Turner was making a sketching tour of the Isle of Wight. Other artists visiting that year did not visit the eastern half of the island, preferring to concentrate on the more spectacular western end.¹⁶ Turner spent most of his time in the west, and turned one sketch of Freshwater Bay into a full painting. Fortunately he then turned east and walked along the downs. His view from the windmill towards Brading contains some artistic licence, but the details of the construction of the cap show that its design stayed much the same throughout the life of the mill. The chain hangs down from a large wheel, so when the miller pulled on the chain the worm behind was turned to exert maximum pressure to ensure that the heavy cap moved so that the sails would be facing the wind. The windows are in the same position as in today's mill. The view looks over the harbour, which in Turner's day was still filled twice each day by the tide¹⁷, with Brading seen in the distance. The common sails are damaged, with one lying on the ground. The sail opposite appears to have been removed so that the mill could operate on the other pair (the lower sail appears to have canvas on it).

Another visitor to Bembridge in 1795 was a mad dog from Wootton Bridge Mill (sic) according to a paper in the Dennett collection. The dog 'bit Six Cows and three Hogs at Bembridge Farm, one Hog of James Jackman, Labourer to Mr Mackett...and 'Three Hogs and

¹⁵ Tate Britain, sketchbook D00458. Also viewable on the Tate website. A copy is kept at the National Trust shop.

¹⁶ Rowlandson and friends, recently acquired by the Isle of Wight Council.

¹⁷ Until 1879-1882 when the present embankment was built between St Helens and Bembridge.

BEMBRIDGE WINDMILL AND ITS MILLERS

two Cows of Miller Kent'. The dog seems to have continued to the attacks until May. The animals then went mad, sometimes two or three weeks later. The interesting point here is that this event shows that Kent kept pigs, and the fat would have been invaluable for greasing the cogs and also the curb on which the cap rests.

From 1803 to 1820 one of Henry Dennett's younger sons, John Dennett, is described as the miller¹⁸, although he seems to have plenty of help. John Kent is recorded as the miller in 1810. His son Frederick took over in 1811 and is busy receiving wheat from John Dennett in 1813¹⁹. Also in 1811 the Hampshire Chronicle of 14th January records that "*Mr Cook, miller of Bembridge (was) found frozen to death by his own mill Saturday 5th January*". Sadly we know no more about this sad event, except that his burial is recorded, aged 33.²⁰

John Dennett was married in 1798 and seems to have handed over the mill to others to work, concentrating on his farming. One of the labourers at the mill was James Jacobs, recorded marrying Miss Anna Cole, of Bobbington Farm in 1820.²¹ Other labourers at this time included Frederick Kent and H. Foord. The Land Tax records²² make it clear that while Henry Dennett was alive, he remained the proprietor. John probably took on the mill because he was the younger son and would not inherit the bulk of the estate. The Churchwarden's Account book²³ lists Mr Weight 'for his house and mill' between 1770 and 1775. John Dennett is given as occupier from 1806 to 1809, then John Kent in 1810, following by Frederick Kent (1811 to 1817) and H. Foord in 1818-1819. James Jacob is the occupier from 1820 to 1827, followed by Luke Langley from 1827-8, who was then succeeded by William Fowles from 1828-1830. From 1832 John Tull takes over.

In 1831 during difficult times of poor harvests and political unrest William Fowles, 'late of Bembridge in the Isle of Wight, Miller' went bankrupt. He had not been at Bembridge long, because in the 1820s he was working in Ryde. George Mundell, writing in 1915, said William Fowles went to America.

The Dennetts were doing well. The elder Henry Dennett had a daughter who met Nash Grose in 1776 at Newport Market and despite the opposition of his mother they eventually married.²⁴ Grose went on to become a Royal Justice of the King's Bench and was knighted. The Dennetts were able to take over tenancies of other farms in Bembridge, including Knowles, the farm next to the windmill, known today as Mill Farm. They seem to have been the main suppliers of corn to the mill. Even Nicholas Smith, who rented Yaverland Farm around 1800, sent his grain to Gosport to be ground, rather than cart it to Bembridge mill.²⁵

¹⁸ HRO Q22/1/469

¹⁹ John Dennett's pocket book discovered in 2003, to be placed in the Record office. Extracts given relate to the mill only.

²⁰ IWCRO/BRA/1811 burial

²¹ Hampshire Chronicle, 26th June

²² HRO Q22/1/469

²³ IWCRO /BRA/APR/2A/1 and IWCRO/ BRA/APR/3

²⁴ 1200 years in St Helens, David Low and Sheila White, 1977 p.43 In Lord Mountbatten Library, Newport.

²⁵ Diary of Nicholas Smith 1786-1829 (IWCRO BRS/397).

BEMBRIDGE WINDMILL AND ITS MILLERS

John Dennett left behind two of his notebooks which tell us more of the story of the mill.

| | | | |
|--|-----|----|------|
| July 1817 paid Mr Urry to buy timber for the Windmill | £7 | | |
| September paid Mr Cave for a Wheel for the Mill | £2 | 10 | |
| September paid Mr Cave for sawing timber for the mill | £2 | 10 | |
| February 24 th 1818 paid Mr Kingswell for a Sail that was put over the top of the mill August 1817 | £7 | | |
| October 21 1819 paid Jenkins for repairing the windows at Windmill House | £3 | | |
| | | | |
| December 22 Paid for bricks and lime for the windmill House | £0 | 17 | |
| Dec.23 paid Jenkins in part for cutting a doorway to the Windmill | £0 | 18 | |
| Feb. 1820 paid Jenkins for ditto | £0 | 9 | |
| July 26 th paid Jenkins for repairing Mill House | £3 | 0 | |
| August 8 th paid for four new sails for the windmill | £12 | 5 | 11 |
| October 11 th Mr Long repairing Mill House | £1 | 12 | |
| Paid for lime and hair | £1 | 4 | 6 |
| Paid for tile(s) | £0 | 9 | |
| Paid Mr Beer for repairing Iron Work of the Mill | £0 | 9 | |
| Nov. 15 1820 paid Mr Cave for Repairing the Mill House | £27 | 19 | 2 |
| Nov. 21 paid for Rope to span the Shafts of the Mill | £1 | 4 | 9 |
| March 28 th 1821 paid Mr Beer Repairing Iron Work of the Mill | £0 | 9 | |
| 1822 May 6 Paid Mr Cave for timber and repairing the quay at Brading | £8 | 15 | 11/2 |
| 1824 Paid Mr Bear for Iron Work to the new Veans (<i>vanes?</i>) of the Mill | | 18 | |
| 1825 July Paid Mr Cave for repairing the store house at Braiding Quay, etc.(sic) | £7 | 5 | 10 |
| 1829 March Mr Bear for Iron work for the Mill | | | |
| July 30 th Paid for Lime and building a wall in the front of Windmill House | £4 | 15 | |
| | | | |
| May 29 th 1828 Paid for Mrs Dennett Newport to Mr Cave for new Shutters for the Mill House and Timber for making a pair of B...(<i>illegible</i>) dores at Mill Bar | £6 | 19 | 9 |

There is an account of “Barley sent to the Mill in the year 1818 for the fattening of hogs”. The navy bought meat from this part of the island, although hogs were often kept for personal consumption.

This material adds considerably to our knowledge. When Turner painted the mill there was only one entrance. The second doorway was built 1819-20 by Jenkins. The Mill House cost considerable sums to maintain. If the sails had been repaired in the late 1790s following Turner’s visit, it did not take long for a new set of sails to be needed. The cost of the four sails seems low and it may be that the August 8th payment does not include the cost of the timber. It is unclear what the Sail was (costing £7) that was put over the top of the mill in 1817.

The names of most of the millers and some of their assistants can be given. The Census records suggest that two men usually worked the mill, although it will be seen that there was a woman in charge for a number of years.

BEMBRIDGE WINDMILL AND ITS MILLERS

- 1746 E Beker (name on ladder rung - might be a builder)
- 1770-1775: Mr Weight
- c.1782-1795: John Kent (and probably after this date)
- 1803-1820: John Dennett (the owner after 1813 when his father Henry had died)²⁶
- ?1795-c.1818: John Kent (to provide experienced assistance to Dennett?)
- 1811: Mr Cook – found frozen to death.
- 1811-1817: Frederick Kent (presumably an assistant)
- 1818-1819: H. Foord
- 1820-1827: James Jacob On 16th June 1820 the register at Godshill church records that James married Hannah Coles (Anna Cole in the Hampshire Chronicle) and ‘went to work’ at Bembridge mill.
- 1827-28: Luke Langley
- 1828-1831: William Fowles He had been employed at Ryde windmill by John Cooper but by 1831 he had gone bankrupt. George Mundell writing in 1915 said he went to America in 1833²⁷. In 1831 Fowles had great difficulty in paying his rates of 1 shilling.
- 1832-1839: John Tull (died intestate leaving less than £300²⁸) In 1838 he was living in Knowles (Mill Farm today)²⁹
- 1839-1852: Mrs Frances Tull (recorded in the directories and census, so she was presumably the chief tenant). John Tull’s second wife. The rateable value of the mill was £15. However Knowles Farm was worth £55.
- 1841: Frederick Kent (with Mrs Tull) returned - to provide expertise? Aged 57. Described as a miller journeyman in census
- 1841-1851: George Knight (with Mrs Tull) An apprentice in 1841.
- 1855-1861: Benjamin Jolliffe Also a baker, and a bricklayer back in 1831, is given as miller in Post Office Directory of 1855. Living with John Lilleywhite, who is described as head miller in the 1861 census Henry Jeffery lived in Mill Cottage. In 1857 Jeffery is recorded as living at Knowles, in 1862 with John Lilleywhite
- 1861-3: John Lilleywhite Aged 35, living at Wolverton Farm, the head miller. He came from Emsworth. Benjamin Jolliffe is living with him. Ewan Lilleywhite is briefly the miller in October 1863-4. Henry Jeffery is still living at Knowles and may have been working the mill.³⁰ John Lilleywhite went on to manage other local mills at St Helens and Alverstone.
- 1865-1880: James Hunt, miller, corn, hay and straw merchant and farmer, aged 41 in 1871, from Mundham in Sussex; farming 64 acres of Swain’s and Knowles Farms,

²⁶ HRO Q22/1/1/468 and 469 Land tax records Also IWCRO PRO/PR/3 Churchwarden’s Account Books for Brading 1806-1833 The notebooks make it clear that John Dennett was not just a miller, more a gentleman farmer who owned a mill.

²⁷ Information from Mr Roy Brinton

²⁸ HRO 1839AD/79

²⁹ Most of the information about the millers is taken from various directories, supplemented by the census returns.

³⁰ Brading rate books

BEMBRIDGE WINDMILL AND ITS MILLERS

- employing two labourers; with John Jeffery between 1871-1881, labourer, Henry's son, aged 34 in 1881. The mill was still owned by the Dennett family, in the person of Louise Dennett. Hunt lived in Knowles Farm³¹ (although the census lists him at Bembridge Lodge), Jeffery in Cross Road.
- 1885-1895: Robert Luther Tuffley A farmer from Tortworth, Gloucestershire, described as a General Dealer (draper) in 1881, aged 55 with a wife and daughter also described as Drapers. In 1891 described as a miller and farmer. Almost certainly he purchased the mill from the Dennett estate 1889-1890, from the executors of Louise Dennett. He then moved into Knowles Farm. In 1892 the Brading Rate Books call it Mill Farm for the first time.
- 1895-1913: Alfred Morris A farmer living at Mill Farm, but also mentioned at Stanwell Farm.³² The last person to operate the mill was Ernest Arthur Orchard. His son remembered that he considered the mill dangerous by 1913, but the obituary in the County Press says the misgivings were those of Alfred Morris, Orchard's brother in law.. *'He would recall that a miller was not always a man to be envied. If, after a calm day, the wind sprang up at night, then the miller had to rise and set to work.'*³³ Miss Woodford also recalls Tommy Arnold working the mill in 1913.³⁴

Who used the mill? The evidence we have is partly negative: Nicholas Smith's diaries record that in the early years of the 19th century he sent his grain to Gosport to be ground, when he was the tenant of the farm at Yaverland. This suggests that as the Dennetts bought up the farms in Bembridge so their grain was directed to the mill. The notebooks are full of transactions.

The Dennetts had relations in Essex, and when Jeremiah Dennett died³⁵ his widow moved over to Essex. After her death the mill was used by Tuffley presumably in conjunction with his bakery, but the demand for stone ground flour was vanishing as the railway (opened to Bembridge in 1882) could bring in white flour from the steam mills in Wootton and Southampton. From 1895 when Morris bought the mill it only opened in the autumn. Young boys ('nippers') were paid 1d for climbing the sails and fastening the canvas to them.³⁶ The County Press said much later in 1952, that 'Farmer Morris was "a little bit scared" of the mill and had no wish for its working. Mr Orchard however influenced him and used to come over from Wootton to superintend matters, although he could never persuade the owner to remain in the building while the mills was running'.³⁷ When the First World War broke out the loss of manpower and the state

³¹ Brading rate books 1870-1881

³² Directory

³³ Information from John Woodford, obituary in Bembridge Parish magazine, and Isle of Wight County Press 25.10.1952

³⁴ Isle of Wight County Press 7.7.1973

³⁵ See memorial in Bembridge Parish Church

³⁶ Information from John Woodford, whose father was a nipper in the 1890s.

³⁷ Isle of Wight County Press, Saturday October 25th 1952. This article also says he ground about 15 to 20 sacks of wheat at a time. The usual understanding is that this did not happen after 1895,

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of the mill meant that it was no longer worth opening just for grinding animal feed. The stones were removed and the mill allowed to deteriorate, until in 1933-5 the SPAB undertook some repairs. It was then used as a cowshed. During the Second World War the Home Guard made it their base, and then in 1959 Mr Morris's niece and heir, Mrs E. Smith offered the mill to the National Trust. The island raised the money for restoration and from 1962 the Trust has opened the mill to visitors each year.³⁸

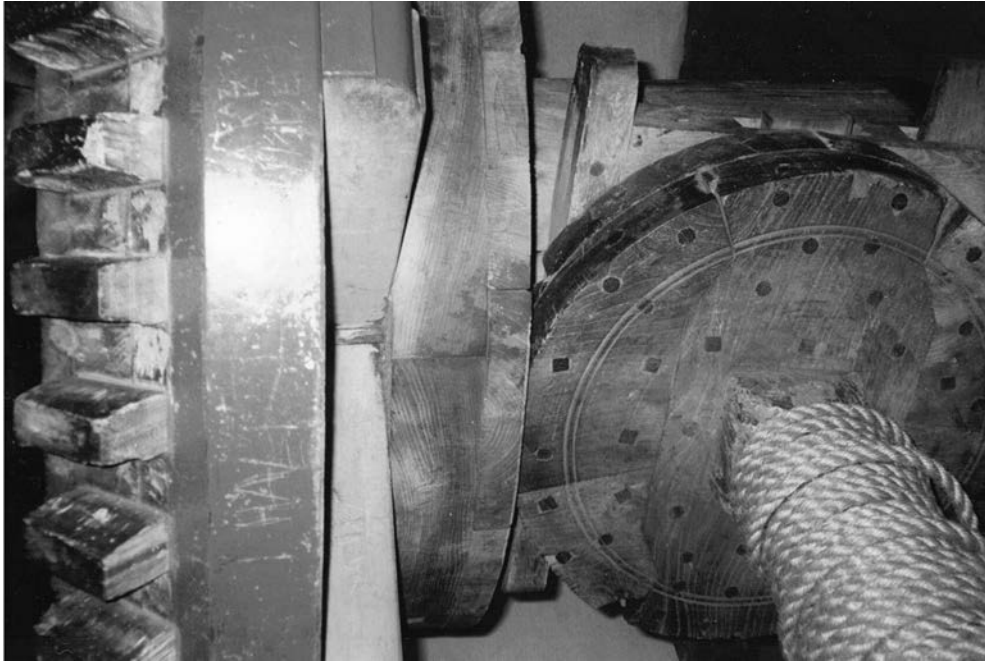


Auxiliary Drive Shaft

so it would be interesting to know when he did this. This probably refers to the time when Tuffley owned the mill.

³⁸ I have not covered information on the machinery in this article. The National Trust Guide is helpful here, and much work still needs to be done to ascertain when the machinery was put into the mill. The metal sections are clearly not original, and even the sack hoist would not have been there in its present form in the 1740s. The present mill does not have the outrigger and bracers to be seen in Turner's painting and in P. Brannon's print of May 1840

BEMBRIDGE WINDMILL AND ITS MILLERS



Sack Hoist

Acknowledgements.

Thanks must be given to the National Trust and its supporters for their work in preserving the mill over the last forty years. Much work had to be done after the great storm of 1987, for example. I learnt much from Terry Blunden and Sue Lyttle about the mill, and at the local level from John Woodford. John's father told him that as a boy in the 1890s he was paid 1d for climbing the sails and attaching the canvas. The earliest notebook of the Dennetts was already in the Record Office in Newport, and the others will follow. My thanks to Molly Pewsey for allowing me to make use of them. The hardest spadework has however been done by Ken and Shirley Kirsopp who went through the newspapers and other sources searching for information about the island's windmills, and kindly made their findings available to me.

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The National Trust Guide (Rev 1981 : T.R. Parsons) is reliable on the technical side, but is inaccurate on other matters, for example the information in the first paragraph on p. 4 is taken from an inaccurate article in the County Press of 7 July 1973: the railway opened to Bembridge in 1882, not 1894-7. *Mills of the Isle of Wight*, K. Major, (Charles Stilton 1970), was a pioneering work. Rex Wailes: *The English Windmill* (London 1967) has a photograph of the mill before restoration but no information on the mill itself. There are photographs of the windmill in the Bembridge Heritage Society Exhibition. In 2006 The National Trust brought out a new, simpler illustrated guide. This is an excellent introduction to the Mill.

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FUNGI NEW TO THE ISLE OF WIGHT, 2005

Jackie Hart

The autumn fungi season began very dry which resulted in not many fungi being seen. However, this was soon followed by wet conditions and a long period of mild weather with the first frosts arriving late into November.

The following list of fungi have not previously been recorded on the Island:

Ascomycetes

| | |
|------------------------------------|---|
| <i>Arachnopeziza obtusipila</i> | Firestone Copse, 13.3.05 DB |
| <i>Arthrocladiella mougeotii</i> | Gurnard, 9.8.05 DB |
| <i>Ascochyta metulispora</i> | Littleton Coombe, 7.8.05 DB |
| <i>Ascochyta obiones</i> | Hamstead Spit, 15.5.05 CP |
| <i>Asterosporium asterospermum</i> | Osborne, 3.12.05 DB |
| <i>Blumeria graminis</i> | Parkhurst Forest, 7.6.05 DB |
| <i>Calloria neglecta</i> | East bank of R. Medina, 9.3.05 DB |
| <i>Cercospora depazeoides</i> | Grammar's Common, 25.9.05 DB |
| <i>Cercospora scandens</i> | Fort Victoria Country Park, 21.9.03 DB# |
| <i>Cercospora violae</i> | Lock's Copse, 19.6.05 DB |
| <i>Colletotrichum trichellum</i> | Pelham Woods, 8.10.05 DB |
| <i>Cristulariella depraedens</i> | Newbarn Down, 21.8.05 DB |
| <i>Diaporthopsis pantherina</i> | East bank of R. Medina, 9.3.05 DB |
| <i>Diatrypella favacea</i> | Hurst Copse, Briddlesford, 30.1.05 DB |
| <i>Didymella commanipula</i> | Osborne, 12.4.05 DB |
| <i>Drepanopeziza ribis</i> | Shalcombe Down, 27.8.05 DB |
| <i>Epichloe clarkii</i> | Whale Chine, 17.7.05 DB |
| <i>Erysiphe euonymi</i> | Porchfield Rifle Range, 19.6.05 DB |
| <i>Erysiphe hyperici</i> | Dodnor, 26.9.05 DB |
| <i>Erysiphe verbasci</i> | Yarmouth, 13.10.05 DB |
| <i>Guignardia aesculi</i> | Northwood, 23.6.05 DB |
| <i>Guignardia istriaca</i> | Belmont Copse, 20.4.05 DB |
| <i>Hypoxylon cohaerens</i> | Barton Wood, 15.2.05 DB |
| <i>Leptosphaeria acuta</i> | Westover Plantation Common, 15.10.05 DB |
| <i>Lophodermium conigenum</i> | Grammar's Common, 25.9.05 DB |
| <i>Microglossum olivaceum</i> | Northwood Cemetery, 27.11.05 CP |
| <i>Monilinia laxa</i> | Hurst Stake, 5.9.05 DB |
| <i>Nectria episphaeria</i> | Westover Plantation, 15.10.05 DB |
| <i>Nectria purtonii</i> | Mottistone, 19.1.05 DB |
| <i>Oidium lauracearum</i> | Gurnard, 27.3.05 DB |
| <i>Paraphaeosphaeria rusci</i> | Osborne, 24.4.05 DB |
| <i>Phloeospora aceris</i> | Lock's Copse, 19.6.05 DB |
| <i>Phomopsis pterophila</i> | Osborne, 15.2.05 DB |
| <i>Phyllactinia mali</i> | Yarmouth, 22.10.05 DB |
| <i>Ramularia bryoniae</i> | Newbarn Down, 21.8.05 DB |
| <i>Ramularia circaeae</i> | Gatcombe, 7.7.05 DB |
| <i>Ramularia inaequale</i> | Afton Down, 16.7.05 DB |
| <i>Ramularia jaapiana</i> | Chawton, 16.9.05 DB |

FUNGI NEW TO THE ISLE OF WIGHT, 2005

| | |
|---------------------------------|-------------------------------|
| <i>Ramularia montana</i> | Shalcombe Down, 31.7.05 DB |
| <i>Ramularia sambucina</i> | Wellow Down, 3.8.05 DB |
| <i>Ramularia scolopendrii</i> | Brighstone Down, 21.8.05 DB |
| <i>Sclerotinia candolleana</i> | Parkhurst Forest, 12.11.05 DB |
| <i>Sepedonium chrysospermum</i> | Grammar's Common, 25.9.05 CP |
| <i>Septoria clematidis</i> | Rew Down, 11.9.05 DB |
| <i>Septoria hydrangeae</i> | Yarmouth, 22.10.05 DB |
| <i>Septoria lychnidis</i> | Grammar's Common, 22.5.05 DB |
| <i>Septoria sorbi</i> | Little London, 17.5.05 DB |
| <i>Sphaeropsis sapinea</i> | Firestone Copse, 20.1.05 DB |
| <i>Sphaerotheca spiraeae</i> | Redway Farm, 16.7.05 DB |
| <i>Theadonia ligustrina</i> | Osborne, 20.9.05 DB |
| <i>Venturia fraxini</i> | Rookley, 26.6.05 DB |
| <i>Venturia rumicis</i> | Saltern Wood, 14.5.05 DB |
| <i>Xanthoriicola physciae</i> | Newtown, 31.12.05 DB |

Basidiomycetes

Agaricales

| | |
|---|--|
| <i>Leucocoprinus birnbaumii</i> | in indoor flower pot at Yarmouth, 1.7.05 CP |
| <i>Tricholoma atrosquamosum</i> var. <i>squarulosum</i> | Parkhurst Forest, 5.11.05 CP |
| <i>Volvariella bombycina</i> | on wooden planks at Ventnor Botanic Gardens, 27.7.05 DR |

Chytridiomycetes

| | |
|--------------------------|-----------------------|
| <i>Physoderma vagans</i> | Gurnard on 23.5.05 DB |
|--------------------------|-----------------------|

Oomycetes

| | |
|----------------------------------|----------------------------|
| <i>Peronospora oerteliana</i> | Lock's Copse on 10.8.05 DB |
| <i>Plasmopara umbelliferarum</i> | Gatcombe on 7.7.05 DB |

Teliomycetes

Uredinales

| | |
|----------------------------------|----------------------------|
| <i>Naohidemyces vacciniiorum</i> | Lucombe Down on 31.8.05 DB |
|----------------------------------|----------------------------|

Recorders

| | |
|----|------------------------------------|
| DB | David Biggs |
| CP | Colin Pope |
| DR | Derek Reid |
| # | Determined microscopically 11.2.05 |

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LEAF MINING ORGANISMS NOT PREVIOUSLY RECORDED ON THE ISLE OF WIGHT

Dr. D.T. Biggs

Since the publication of my last list of newly found leaf miners (Biggs, 2006) five new species for the Island have been found, three flies and two moths.

DIPTERA

Agromyzidae

Agromyza albitarsis Meigen, 1830

At Hurst Stake, SZ5090, there are some planted Aspens (*Populus tremula*.) On 25th July 2005 I found several vacated mines of this fly. They were very noticeable. Each mine is a full-depth blotch visible on the upper leaf surface, and involving c.40% of the area of the leaf. They were a grey-brown colour, a somewhat irregular oval, and particularly obvious because they showed numerous darker brown arcs throughout. Such arcs are usually the features of a dipteran larva's feeding activities. However I was surprised to find, on microscopical examination, that these arcs were made of frass, there being both primary lines, and secondary lines at right angles to these. The frass grains were a dark reddish-brown and rather thread-like. Each mine had an upper surface exit hole. Although *Populus tremula* is favoured, this fly does rarely mine other *Populus* species and occasionally it will mine willows, *Salix spp.* The larvae mine in June and August. This species is found in northern and central Europe as well as in Great Britain. It has also been found in Canada. With respect to England it is reported to be widespread but local.

Cerodontha pygmaea Meigen, 1830

Bill Shepard found the mine of this fly on a soft-grass (*Holcus sp.*) at Lock's Copse, Porchfield SZ4491 on 10th August 2005. This mine was a full-depth blotch 3.5cm long involving the whole width of the leaf blade and whitish and translucent. Luckily a puparium was present which allowed me to identify the causer. On microscopy the mine was seen to consist of four parallel linear mines, each with its own track of frass, which later merged into an irregular elongated blotch. The pupa was a brilliant shining violet-black and was attached to the leaf by a silken thread from its rear end. Neither the anterior nor the posterior spiracles broke the surface of the leaf. The posterior ones lay together on a concave pillar. This is the commonest *Cerodontha* mine in grasses and the fly attacks many grass species. The larvae mine in May to September in two generations. Found throughout the northern hemisphere, in the British Isles it is reported as being widespread and common.

Liriomyza sp. Hering No. 3805

Whilst searching for fungi in Grange Chine SZ4281 for the annual Fungus Foray on 15th October 2005 I came across a young adder basking in the sun and, next to it, a leaf mine on Ribwort Plantain (*Plantago lanceolata*.) This was of a strange pattern, a very long, extremely narrow, convoluted and shallow corridor, leading eventually to an elongated blotch centred over a side vein. Both the raised corridor and the blotch were buff in colour, contrasting markedly with the dark green of the leaf. The corridor was translucent and the blotch opaque. Microscopy revealed the corridor to be empty of frass and the blotch to contain large black frass grains. Hering (1957) gave numbers to all his described leaf mines even when the causer could not be identified. My mine corresponded exactly with that assigned the number 3805 by Hering. He gives a very strange disjunct distribution viz. Naples, Sweden and Great Britain.

LEAF MINING ORGANISMS NOT PREVIOUSLY RECORDED ON THE IOW

LEPIDOPTERA

Coleophoridae

Coleophora limosipennella Duponchel, 1843

A walk in Parkhurst Forest on 7th June 2005 resulted in my finding several leaves of an English Elm (*Ulmus minor*) at SZ4690 bearing unusually large and strangely yellow fleck mines. A fleck mine is a full-depth mine, usually small and usually white and transparent, empty of frass and with a tiny opening. Fleck mines are characteristic of the larvae of the case-bearing micro-moths of the family Coleophoridae. Further examination of the leaf revealed a dark brown larval case, 10mm in length, lying almost parallel to the leaf surface, and with a serrated dorsal keel made from leaf fragments from the leaf edge. Dr. J. R. Langmaid confirmed my identification. There are no certain previous records of this moth on the Isle of Wight. It was not found in south Hampshire until 1984. There is one record of the species in a manuscript by Dr. K.G. Blair reporting a specimen of the moth taken in Parkhurst Forest by Mr. S. Wakely before the Second World War. However, before 1970 two other species of the moth were considered to be conspecific with *C. limosipennella* and Wakely's specimen is not available for examination. The 2005 record from Parkhurst Forest is therefore the first confirmed record of the species. It is reported to be locally common in S.E. England, frequenting the margins of woods. The larvae feed in June and July. In Europe it is found as far north as southern Scandinavia, and also in Asia Minor.

Lyonetiidae

Leucoptera lotella Stainton, 1859

On the edge of a ride on the Osborne Estate at SZ5295 on 13th August 2005 I noticed a small white round blotch mine on the upper surface of a leaf of what I assumed at the time to be Common Bird's-foot-Trefoil, *Lotus corniculatus*. At home, further examination revealed the mine to have a spiral of reddish-brown frass attached to the upper epidermis of the mine. There was no initial corridor and the mine contained a larva. I began to wonder whether the host plant was Hairy Birds-foot-Trefoil, *Lotus subbiflorus*. In Goater and Norris (2001) the host plant is stated to be Greater Birds-foot-Trefoil, *L. pedunculatus*, and the moth to be only local in Hampshire, and not found on the Isle of Wight.

I sent the specimen to Dr. John Langmaid who confirmed the identity of the miner and considered the plant to be *Lotus subbiflorus*. The moth is reported to be more or less widespread in southeast England. On the continent it is only recorded from Germany.

With respect to the host plant, Colin Pope examined some material and thought that *L. subbiflorus* was a possibility but he requested more specimens. Returning a few days later to the site I found that it had been strimmed so I will have to return next year.

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MARINE MAMMAL REPORT 2005

Mike Cahill

There were a good number of sightings this year, amongst which were 5 sightings of Harbour Porpoise *Phocoena phocoena*, 3 dead strandings, but also 2 live sightings which is quite unusual in the seas around the Island.

On the 9th October, a Bottlenose Dolphin *Tursiops truncatus*, was seen at Yarmouth Pier swimming around boats. It remained in the Yarmouth area for at least a week.

On the 2nd November, sightings were reported of a dolphin in Southampton Water, on the 8th at Calshot Spit swimming around buoys, on the 9th off Cowes and on the 26th in Portsmouth Harbour. A dolphin was again seen on the 22nd and 31st December off Cowes and in Cowes harbour. It is likely that the same dolphin remained in the Solent from October through to December, a very unusual occurrence for the Solent.

On 17th November, a dead FinWhale *Balaenoptera physalus*, was sighted near the Nab Tower and a hazard warning was broadcast to shipping. On 19th November it was seen close inshore in Seagrove Bay, Seaview. Later that morning it was taken in tow and beached at Springvale where, a few days later, contractors removed the carcass for disposal.

Other sightings include : Striped Dolphin *Stenella coeruleoalba*, Common Seal *Phoca vitulina* and Grey Seal *Halichoerus grypus*.

A full list of sightings is attached in Table 1.

Acknowledgments Our thanks to all who have submitted sightings for this year`s report.

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Marine Mammal Records for 2005
Table 1

| Species | Site | Date | Qty | Comments |
|--------------------|--------------------------------|--------|-----|--|
| Harbour Porpoise | Chilton Chine | 1-Feb | 1 | |
| Seal | Ventnor, off coast | 1-Feb | 1 | Seen in Bay |
| Harbour Porpoise | Sudmoor Point | 4-Feb | 1 | |
| Common Seal | Western Yar | 10-Feb | 1 | Feeding on a Bass. |
| Harbour Porpoise | Chilton Chine | 12-Feb | 1 | Stranded,decomposing. |
| Harbour Porpoise | Woody Bay | 19-Feb | 1 | Stranded, decomposing. |
| Bottlenose Dolphin | Rocken End, offshore | 21-Feb | 2 | Heading West |
| Harbour Porpoise | Dunnose Point, off coast | 6-Mar | 2 | 1.5km off shore, heading SW |
| Bottlenose Dolphin | Ventnor Bay | 8-Mar | 10 | 1km offshore heading West, inc 3 juveniles approx 2m in length. |
| Dolphin | Compton Chine | 16-Mar | 1 | Stranded, Parts of skeleton - tail/flukes /flippers&front of head missing. |
| Seal | Western Yar | 11-Apr | 1 | Hauled out on sandbank |
| Bottlenose Dolphin | Colwell Bay | 1-May | 7 | Seen 1.5km NW of Colwell Bay. Leaping and breaching, seabirds overhead. |
| Grey Seal | Chiltern Chine | 4-Jun | 1 | |
| Striped Dolphin | Isle of Wight | 9-Jun | 1 | Stranded, deep cut by blow hole, put down by Vet. |
| Common Seal | St Cath`s Lighthouse, offshore | 30-Jun | 1 | |
| Common Seal | Medina River, Folly Inn | 28-Aug | 1 | |
| Grey Seal | East Cowes Seafront, offshore | 30-Aug | 1 | |
| Bottlenose Dolphin | Seaview, offshore 1km | 23-Sep | 1 | 2m long. |
| Bottlenose Dolphin | Seaview, offshore 1km | 24-Sep | 1 | swimming fast. |
| Bottlenose Dolphin | Seaview, offshore 1km | | 1 | leaping. |
| Dolphin | Seaview, offshore 4km | 26-Sep | 1 | Seen east of Horse Sands Fort. |
| Bottlenose Dolphin | Seaview, offshore 10km | 4-Oct | 2 | Scars near blowhole, Breaching, heading South. |
| Common Seal | Culver Cliff, offshore | 6-Oct | 2 | Seen from Culver Cliff, heading South. |
| Bottlenose Dolphin | Cowes , offshore | 7-Oct | 1 | Seen from Ferry. |
| Bottlenose Dolphin | Yarmouth Pier | 9-Oct | 1 | stayed for 1 week, seen close to pier and with boats. |
| Bottlenose Dolphin | Yarmouth Pier | 9-Oct | 1 | catching fish. |
| Bottlenose Dolphin | Yarmouth Pier | 11-Oct | 1 | |
| Bottlenose Dolphin | Yarmouth | 13-Oct | 1 | Seen from Ferry |
| Bottlenose Dolphin | Solent, off Calshot | 8-Nov | 1 | |
| Bottlenose Dolphin | off Cowes | 9-Nov | 1 | |
| Fin Whale | Seagrove Bay | 19-Nov | 1 | 53ft long,dead, beached at Springvale for disposal. |
| Common Seal | Medina River | 20-Nov | 1 | hauled out at Island Harbour. |
| Fin Whale | Castle Haven, offshore | 24-Nov | 1 | Remains of dead whale. |
| Dolphin | Cowes, offshore | 22-Dec | 1 | Riding bow wave of Ferry. |
| Common Seal | Cowes Harbour | 31-Dec | 1 | Near Passenger Ferry Terminal. |

THE DISTRIBUTION AND ABUNDANCE OF WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

Anne Marston

Abstract

Wood Calamint (Clinopodium menthifolium Host Stace) has its only British location in the Rowridge Valley on the Isle of Wight. The plant is associated with a woodland edge habitat, and its current range is much reduced compared with the original site description of 1843. Over the years, many organisations have co-operated to bring back the plant from near-extinction, including the Forestry Commission, Hampshire and Isle of Wight Wildlife Trust, The Isle of Wight Natural History and Archaeological Society, Nature Conservancy Council/English Nature, Nunn Harvey Clarke Settlement, Plantlife and Wight Wildlife. Practical management by the Isle of Wight Natural History and Archaeological Society has taken place each winter since 1960. In February 2001, some clearance and re-profiling at the south end of one of the lay bys took place to create an area for the plant to spread. Since then the abundance of the plant has been monitored in late August or early September to gain a greater understanding of how the population is responding to management.

Introduction

In 1843, William Arnold Bromfield discovered a plant new to Britain, Wood Calamint. He wrote in *The Phytologist* “I have great pleasure in announcing, through your pages, the discovery by myself, on the 29th of August last, of a *Calamintha*. It is in a picturesquely wooded valley between Apes Down and Rowledge, that this fine addition to the Labiatae of Britain grows in the greatest profusion and luxuriance” (Bromfield, 1843). A specimen of the plant is in Bromfield’s herbarium, which is now under curation at the Hampshire Museum Service (Plate 1). There is another claim to be the first discovery -a year earlier by Sir David Brewster, also in the Rowridge valley, but this report did not appear in print until 1882 (Davenport Adams, 1882)

Bromfield expected that the plant would be found elsewhere in the British Isles but the Apse Down valley has always been the main British site. Other records from Dorset, Devon, Hampshire and Kent have either not been verified, or have since died out. He describes Wood Calamint as a “highly beautiful plant with flowers of a fine pale rose colour, spotted with purple or even blood-red: the corolla is nearly an inch long and three times the length of the calyx...the leaves are of a brighter green (pointed and much more closely and acutely serrated) than in the usual form of *C.officinalis*: the whole plant is taller, more slender and much less branched; the stems are lax, ascending or reclining; the cymes fewer flowered; the calyx coloured (purple), the teeth of the upper lip strongly recurved: the lower lip of the corolla is very broad, its lobes rounded, the middle one but little exceeding the two lateral ones in length, and separated from them by a very narrow and shallow emargination, hence appearing almost as one undivided lobe” (Bromfield, 1843).

Bromfield describes Apse Down as being “clothed with thick woods, interrupted by bands or strips of down”. The Wood Calamint was growing “amongst the long herbage and under the shade of the bushes in vast quantity, for a great part of the way towards the head of the vale, scattered over the hill-side copses wherever there is shade and shelter sufficient, but unlike our common species of *Calamintha*, always avoiding open and exposed situations or where there is not plenty of herbage and undergrowth...”. He later remarked that “this beautiful species grows readily from slips and when treated as a greenhouse plant or kept entirely within doors becomes extremely showy” (Bromfield 1856). It grows readily from seed where it has been taken into a

garden (Colin Pope pers. com.) and does well in open ground, producing bushy clumps about 60cm high. This is comparable to the range of heights obtained at the Rowridge site. The branching of the garden plants results from insect damage to the apical shoots. Such damage has not been observed at Rowridge; rather the plants are 'drawn up' as a result of competition with the surrounding vegetation.

Attempts have been made to understand the distribution of plants and their communities by reference to the habitat conditions in which they are found. Ellenberg defined a set of indicator values (1979, 1988, Ellenberg *et al* 1991) for a wide range of European plants (not however including Wood Calamint) scoring them on a scale of 1-9 for factors such as light requirement, and soil factors such as moisture, fertility, chemistry, and salinity. These lists have been extended and interpreted for the British Flora and Wood Calamint has been given values of 5 (middle of the range) for soil moisture, soil fertility and light requirement and 8 (alkaline but not equivalent to pH) for soil chemistry. (For a full discussion of the concept see Hill *et al* 1999)

Wood Calamint has its only extant British station in the Rowridge valley. A difficulty with establishing its distribution elsewhere is not helped by a long-standing degree of confusion in the nomenclature. In 1923 H.W. Pugsley reviewed the situation with this genus, and since then further changes have occurred. Wood Calamint is classified in the family Lamiaceae (formerly Labiatae). Bromfield initially thought that it would prove to be the *Calamintha officinalis* known "as a native of rocky and shady subalpine woods in Switzerland, Carniola and other parts of the south of Europe". He did however note that it had a number of differences from the usual form of *C. officinalis*. Its specific name has been changed over the years as understanding of plant families has developed, and a discussion of its classification is beyond the scope of this paper. Currently it is called *Clinopodium menthifolium*; previously it has been referred to as *Calamintha sylvatica*, *C. intermedia*, or *Satureja sylvatica*.

The existence of common names suggests its distribution in mainland Europe includes France (Calament des bois), Germany (Wald bergminze), and Holland (Bergsteentijm). A recent account from The Netherlands describe the habitat as 'dry, calcareous soil along forest fringes and hedges. It is extremely rare in the southern part of the Netherlands' (van der Meijden 2005) and from Germany 'oak scrub and forest in woodland clearings, in road verges on moderately dry base rich soil. Species of semi-shade' (Oberdorter 2001). The plant appears on the Rote List (red list) of rare plants for the region of Hessen in Germany. The Collins Pocket Guide to Alpine Flowers (Grey-Wilson and Blamey 1995) describes its habitat as "open woodland and thickets and stony places to 1600m". A field meeting report of AGEO in canton Aargau in the north of Switzerland notes its presence in a wooded river gorge. A botanist from the Algarve in southern Portugal describes it from the hills of the Monchique, from both cork oak and eucalyptus forest in damp shady places, but absent from the open heaths of the coastal plain (Will Simonson pers. comm.). Clapham, Tutin and Warburg (1962) suggest that it is also in central Spain, Algeria and North Syria. It is absent from Norway, Sweden, Denmark, Finland and Iceland. There is general agreement that the on the Isle of Wight it is on the edge of its range; indeed Bromfield commented (1843) that it was "probably one of those plants that, like *Tamus communis*, *Briza minor*, *Gastridium lendigerum* and other species common here, have a tendency to migrate in a north-westerly direction towards their vanishing point".

The Isle of Wight colony declined to near extinction over a period of 150 years, reaching a low of just five clumps in 1959. Conservation work was begun by the Isle of Wight Natural History and Archaeological Society (IWNHAS) in 1960, and has continued each winter since this date. The plant numbers have recovered in response to this management, although it could not be regarded to be present "in the greatest profusion" previously noted. Currently it is

confined principally to two lay bys (the fifth and sixth from the junction of Rowridge Lane with the middle road B 3401) although there are clumps in the verge both to the north and south (Figure 1).

The Rowridge valley, which lies in the Isle of Wight Area of Outstanding Natural Beauty, is covered by the statutory designation Site of Special Scientific Interest (SSSI) and was notified under the Wildlife and Countryside Act 1981 on 21 January 1987. The presence of Wood Calamint is one of the interest features of the site. Wood Calamint is included on Schedule 8 of the Wildlife and Countryside Act 1981, to protect it from intentional picking, uprooting or destruction without a licence. It was inserted into the list after the intervention of Stephen Ross, the Island's MP, who has been informed of the plant's rarity and the attempts to conserve it by Bill Shepard and Colin Pope. Although some plants may have been lost to collection, the principal cause of decline has been attributed to loss of habitat, resulting from the cessation of coppicing (Bevis *et al* 1978).

The land use and management of the site.

The land use of Apse valley recorded on the 1793 Mudge map shows two woods in the vicinity of the current site, separated by a triangular shaped piece of land. The 1868 Ordnance Survey map shows scrub encroaching into the open land and on the 1908 map these two areas of woodland are joined at the top of the slope and described as Rowridge Copse. In 1930 and 1960 national land utilisation surveys were carried out by Dudley Stamp and Alice Coleman respectively, and on both maps the triangular piece of open land can be seen. Aerial photographs from the 1940s and 1971 still show open land but by 1986 this triangle is barely visible, as is the case in the subsequent photographs of 1993 and 1999.

From the mid 1850s until the late 1880s the wood was coppiced by Bill Shepard's grandfather Frederick Gill, who tended 500 sheep on Apes Down. He used the poles to make hurdles for his own use and for other shepherds. The map of 1908 has symbols for coppicing in the wooded area and in 1935 the Moody brothers set up a more ordered coppice scheme. The war meant that the coppicing was neglected, and tall and dense woodland with old and uncommercial hazel and poor standard oak and ash was the result (Bill Shepard pers. comm.).

There are references to pigs being kept in the woods in 1960 (Frazer 1979) and in recent years pheasant rearing and a shoot have taken place on the land.

In 1960 the road, which leads to the Farm and BBC transmitter was metalled and lay bys constructed. The roadside colony suffered and only a few plants remained in the 5th lay by from the Yarmouth Road. Oliver Frazer and Bill Shepard met with Sir Ralph Clarke the landowner who was sympathetic and arranged to fence of an area 40 x 10 yards to protect it from the depredations of the pigs. On 28 December 1960 14 members of IWNHAS cleared a strip of undergrowth from the edge of the road where 2 plants had been seen in 1960. A photograph from 1962 shows the results of the working group's efforts. The woodland behind the site looks more open at this time.

Reports in the *Proceedings* in the following years noted that the conservation measures were effective "Calamint now flourishing and occasional plants throughout the cleared area". However bramble and nettles were also flourishing. (Waite 1963, 1964; Kettell *et al* 1973) In 1979 Dorothy Frazer wrote to the Estate asking if the fence could be replaced and the area enclosed extended, which was agreed. In the following year, The Nature Conservancy Council gave permission for growing Wood Calamint in cultivation from seed (Frazer 1979, 1980). In 1981, the next lay by to the south, where a small amount of Wood Calamint had been found, was

also cleared and the plants responded well. Yearly working parties have continued since this time. In recent years removal of Bramble, Ivy, Hemp Agrimony, Mullein, Thistles have been significant together with some trimming of woody shrubs. (photos available Plates 2 - 1962 and 3 - 2006).

Research and published information relating to Wood Calamint was reviewed by Heather Winship (Winship 1995). This report identified the ecological requirements of the plant, the likely reasons for population decline, and set out a management plan aimed to recover the species to a point where it had re-established its former range. The main aim of the recommendations was to increase the area occupied by Wood Calamint, and proposed actions included:

1. Return of the area known as the Triangle (an area known to be a site for the plant) to open ground

A Woodland Grant Scheme was entered into by the Trustees of the estate and the area known as the Triangle was coppiced in the winter of 1999/2000. It remained as relatively open ground for two years and searches for Wood Calamint were made in the autumn of 2001 and 2002 but to no avail. Regrowth of both the field and shrub layers has been vigorous and the site is not in a suitable condition for Wood Calamint to grow.

2. Taking the plant into cultivation at Ventnor Botanical Gardens in 2000.

This has been carried out successfully and the plant is present in the woodland areas as well as in the propagation area.

3. Management of area between 5th and 6th lay bys to connect them

There has been some progress on this recommendation. The Hampshire and Isle of Wight Wildlife Trust made some money available to the Society in 1999-2000 for further survey work and habitat creation. The following programme was agreed and carried out in the winter of 2001.

The fence in lay by 5 was removed as it was not serving a useful purpose, and it presented a hazard to working parties clearing the site in the winter.

The hazel scrub on the bank immediately adjacent to the south end of lay by 5 was removed. An area 5 m deep (to top of hedge bank) by 7 m long was cleared and the bank was re-profiled to make a steep slope similar to that of lay by 5. This created an area adjacent to the main population into which the plant could spread.

One row of hazel stools behind lay by 6 on top of the hedge bank was coppiced to increase light available to Wood Calamint and prevent damage to plants. The hazel overhanging the lane is mechanically trimmed to allow access for farm vehicles and occasionally large branches drop down and damage the plants. Removal of these hazels along the lay by removes the need for this trimming.

The annual clearance of the main lay bys by a volunteer working party from the Society in February has continued. The aim is to clear all growth back to ground level. In the two years after lay by 5 was extended growth of Mullein, Lesser Burdock and Spear Thistle was controlled by hand pulling of plants and this has been effective in removing the threat they present to the lower growing vegetation. Cut material is dragged clear into piles underneath the coppice further back; in addition, some of the overhanging branches on the shrubs at the back of the lay bys are removed. On some occasions this has proved difficult to achieve if the weather has been wet or volunteer numbers have been low.

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

The following items in the Heather Winship's report have yet to be acted on.

4. *Adjacent woodland areas to be coppiced on a rotation* to benefit Wood Calamint, as well as Dormice and Red Squirrels.
5. *Summer clearance of lay bys*
6. *Scraping of soil and creation of a ride*

Wood Calamint studies 1999 to 2005

A small team from the botanical section of the society, Ann Campbell, Beth Dollery, Maureen Whitaker and Anne Marston, and Janet Ager from Medina Valley Centre began a series of detailed observations on the abundance and distribution of the plant in September 1999. Following their initial report, some additional clearance took place, as described above, with the intention of creating more habitat. The abundance of the plant was subsequently assessed during its flowering time each year from 2001 to 2005 inclusive.

Distribution

Both sides of the length of Rowridge Lane from its junction with the B3401 to the lay by at GR SZ 452865 were searched. The position of plants was noted and their location in relation to landmarks was assessed by accurate pacing. The field boundary below the hazel hedge (opposite lay by 5 and 6 and south to the footpath) was also searched between GR SZ 453867 and SZ 453868. The positions of the plants were subsequently recorded with a GPS unit (eTrex personal navigator Garmin corporation) and plotted on to a map base. Photographs were taken from fixed points to provide data for comparison in subsequent years

Abundance

Wood Calamint spreads both by the germination of scattered seed and from established plants by growth of rhizomes. It is difficult to determine what constitutes a 'plant', so the number of flowering shoots was counted, being judged as a method that could be subsequently repeated with some degree of reliability.

Initially the distribution and size of clumps within the two main lay bys were mapped using tapes and a scaled grid. Clumps of tall and large vegetation of other species were recorded by this method. For the stands in the lay-bys, the number of shoots was estimated by counting the number in a 50 x 50 cm quadrat, and then multiplying by the estimated area. In the survey of 1999, there was limited access to some of the plants as a barbed wire fence ran across lay by 5. For each of the isolated clumps of Wood Calamint, all the flowering shoots were counted.

In subsequent years this method was further refined to give a more rapid and reliable survey. Estimation of the area occupied by the plants is difficult to record accurately, because the flower spike is delicate and can be difficult to see unless growing in a mass with others. The tape was laid out along the edge of the lay by. A 0.5 x 0.5m open quadrat was placed systematically over the whole area (in effect a series of continuous belt transects) and the abundance in each was estimated according to the following scale.

| Abundance | Level of % cover |
|-----------|------------------|
| 1 | <20% |
| 2 | 20 - 49% |
| 3 | 50 - 80% |
| 4 | >80% |

The maximum number of flowering spikes in a 50cm x 50cm quadrat was approximately 50.

Plants growing in association with Wood Calamint

Wood Calamint is considered a ‘threatened’ plant by the Botanical Society of the British Isles. All plants on the ‘threatened’ list are being investigated in terms of their vegetation community requirements to help understand their ecology.

Data have been made available from the BSBI threatened plant database and visits to the site have been made at intervals during the monitoring period to record the species growing in both lay bys. In 2005 a series of fixed-point photographs was taken to record the development of the vegetation from May to September.

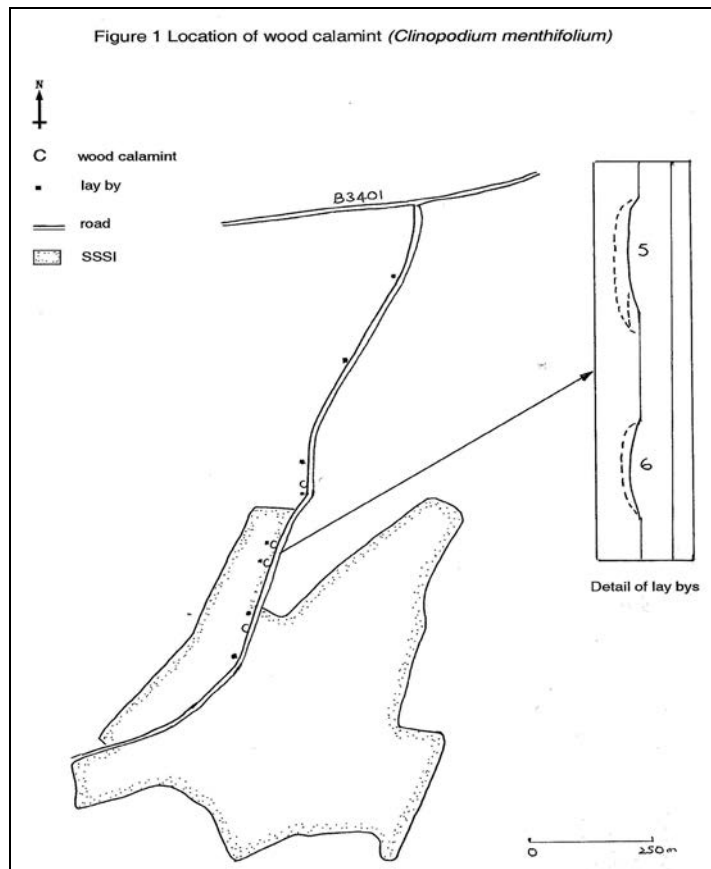
Seed Bank Investigations

Samples of soil were collected from various locations on the western side of Rowridge Lane in September 1999, placed in seed trays and watered over a period of months to determine if there was any viable seed in the soil.

Results of monitoring 1999 – 2005

Distribution

The distribution of the plant is shown in Figure 1. The most northerly clump lies outside the SSSI boundary.

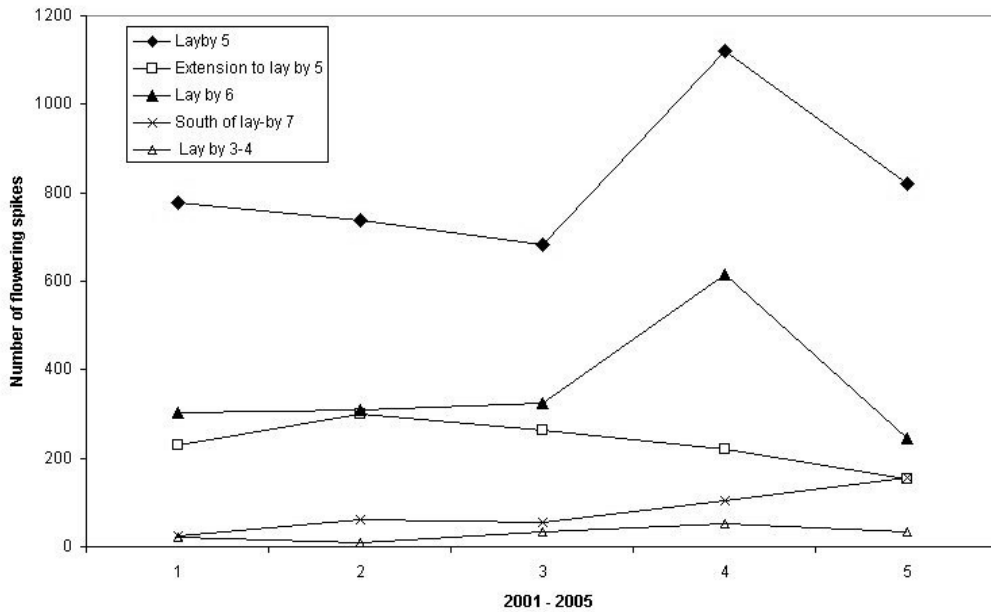


Abundance

The position of the clumps has shown a similar distribution throughout the monitoring period, although their precise position varies slightly. In the main lay-bys, where the Wood Calamint is growing amongst tall plants, the spikes are relatively long and the position they adopt depends on that of the surrounding plants, even if they are growing from the same rootstock as the previous year. The greatest abundance is along the lower edge of the lay bys.

An analysis of the results by area Figure 4 gives an indication of how the plant is faring in each part

Figure 4 Number of flowering spikes in selected areas



The estimated number of flowering spikes in each year is given in appendix 1. Mapping of the results gives a more visual representation shown in Figures 2 and 3.

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

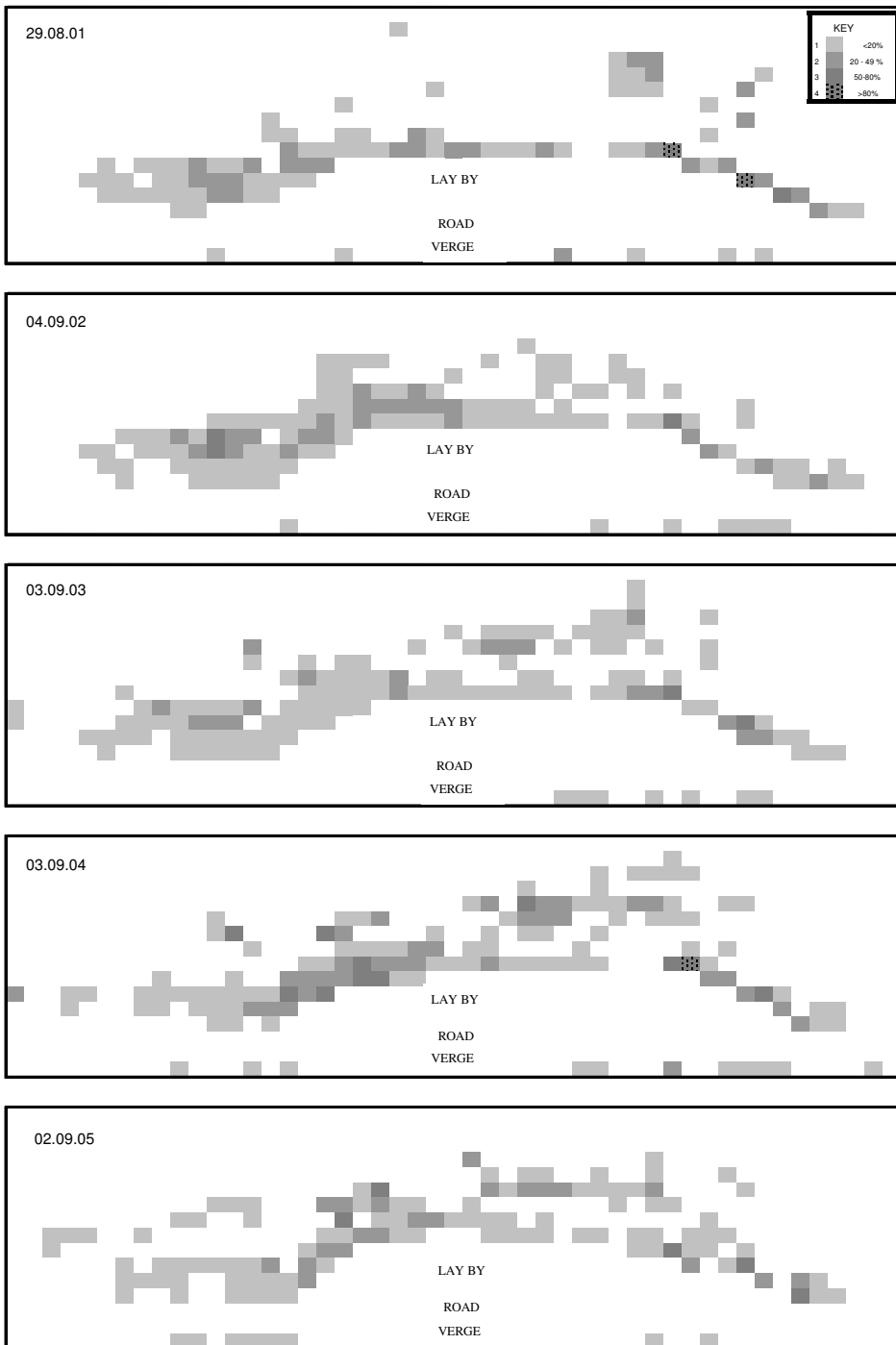


Figure 2 Distribution of wood calamint in lay by 5

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

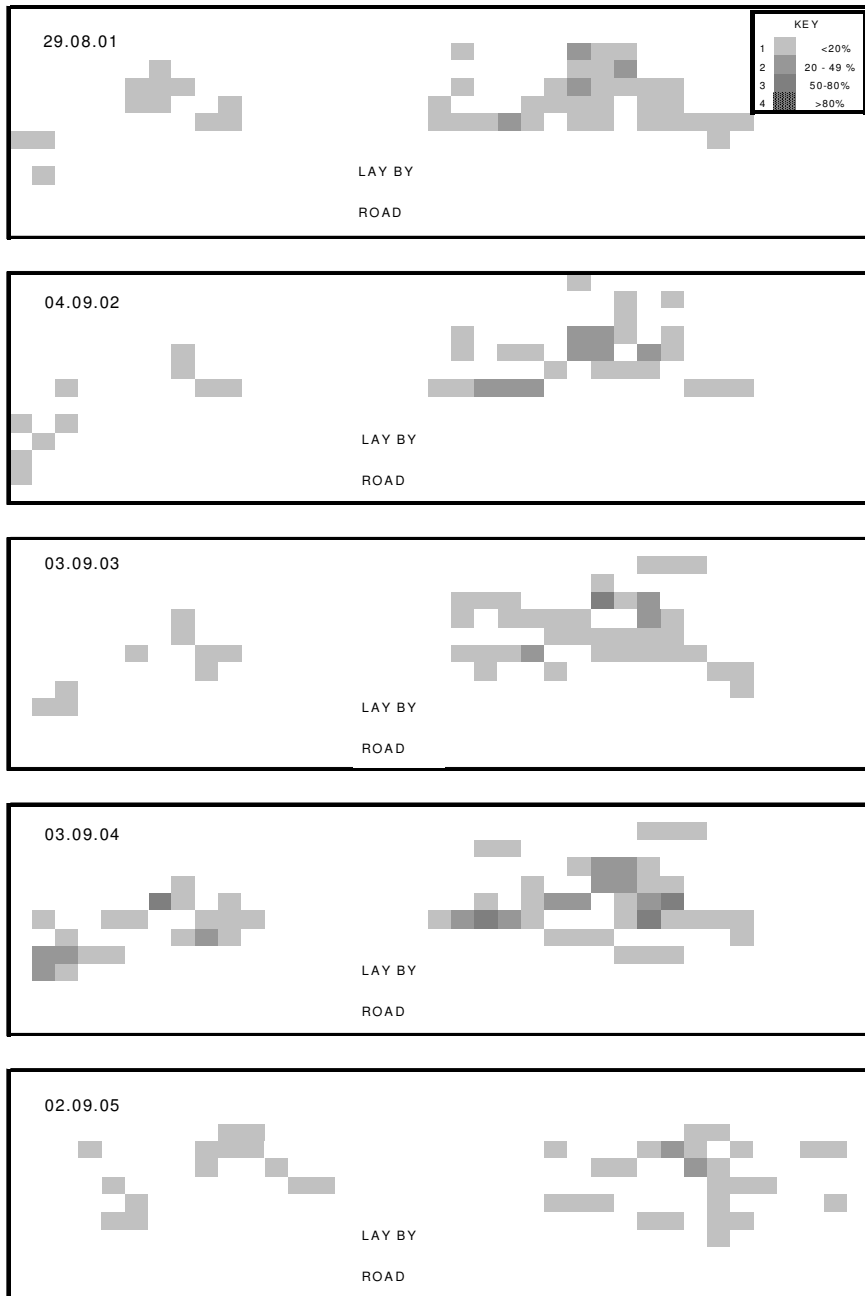


Figure 3 Distribution of wood calamint in lay by 6

In the main lay bys there has been fluctuation in the number of flowering spikes but of particular note is the trend seen in the extension to lay by 5. The plant grew rapidly in the first two years but in the last three years has shown a downward trend. This is attributed to the extremely vigorous growth of Hemp Agrimony, which from June onwards dominates the area and causes noticeable shading. It is difficult to see the plants growing underneath and they are straggly in growth with very pale pink flowers; there are also non-flowering shoots present.

The number of flowering spikes on the plants south of lay by 7 has steadily increased and in 2005 the plant had three times as many flowering spikes as in 1999 and was present over a 4.5 m length of the verge. The clump near lay by 4 continues at a similar abundance, but plants have not consistently been found by the stile. The edge of the field opposite the main site was not searched as it takes a disproportionate amount of time and it is not a location that will be managed for the survival or spread of the plant.

Associated species

A full list of associated plants is given in appendix 2. A total of 92 different species was recorded in the two main lay bys of which 10 are ancient woodland indicator plants. 79 species occur in lay by 5 and 67 in lay by 6. Fifty-five species are common to both. The species are typical of disturbed woodland, and include some that are associated with chalk soils. The plant community conforms to W22 of the National Vegetation Classification: Ash-Field Maple-Ramsons (Rodwell 1991). The abundant species (more 50% cover) are Ramsons (*Allium ursinum*), Hemp Agrimony (*Eupatorium cannabinum*), Ivy (*Hedera helix*), Dewberry (*Rubus caesius*), Nettle (*Urtica dioica*), Ground Ivy (*Glechoma hederacea*).

The difference between the two areas can be accounted for in part by the plants found in the season after the clearance of the lay by extension when plants of disturbed ground were found in lay by 5. The fixed-point photography in Plates 4 and 5 illustrate how the appearance of the lay bys changes over the flowering season.

Seed bank results

In all cases, seeds germinated, but the seedlings quickly died in all but the sample taken from the top of the bank by lay by 6. Fifteen species grew from this sample including Wood Calamint and it has subsequently flowered. (see appendix 2 for full list). Wild Garlic (*Allium ursinum*) grew from in the soil sample derived from the area between lay bys 5 and 6

Future management of the site

New proposals for SSSI management have recently been drawn up, and this includes some short rotation coppicing and grazing of the woodland to encourage the formation of dappled shade habitats and a herb layer which does not rapidly form a closed canopy. Extra clearance work for the lay bys containing Wood Calamint has been agreed. Clearance of Hemp Agrimony by hand pulling and/or strimming is planned for late May or early June to reduce the competition for light. Unless this action is taken further decline is likely and the benefit of the habitat creation scheme in 2000 will no longer apply. If further open habitat is created between the lay bys this management is likely to be required here also.

Trimming of the woodland edge to allow vehicles to pass along Rowridge Lane has not caused a problem to the Wood Calamint since the removal of the hazels at the top of lay by 6. There are no overhanging branches above either lay by so no cutting is necessary, and therefore there is no disturbance to the plants. The area south of lay by 7 where the plant has spread over a

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

patch approximately 4.5 m by 1m may be vulnerable to this operation and some thought needs to be given to carrying out a small amount of trimming by hand in this area, so that debris from mechanical cutting does not fall on to the plants.

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Conservation working party 1962

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005



Conservation working party 2006

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

Appendix 1 Calculations of abundance

The number of spikes was estimated from the figure of 50 maximum per 0.5 x 0.5 m quadrat.

| Level of Abundance | % cover | Number of spikes | Mean number of spikes |
|--------------------|---------|------------------|-----------------------|
| 1 | <20% | 1-10 spikes | mean 5.5spikes |
| 2 | 20-49% | 11-25 spikes | mean 18 spikes |
| 3 | 50-80% | 26-39 spikes | mean 33 spikes |
| 4 | >80% | 40-50 spikes | mean 45.5 spikes |

The number of quadrats with each level of abundance was counted, and the total number was multiplied by the mean figure to give an estimate of the number of spikes.

| | 1999 (estimated) | 2001 | 2002 | 2003 | 2004 | 2005 |
|-------------------------|------------------|------|------|------|------|------|
| Lay by 5 | 600 | 779 | 737 | 684 | 1120 | 820 |
| Extension to lay by 5 | | 231 | 299 | 262 | 219 | 154 |
| Verge opposite lay by 5 | 20 | 51 | 39 | 39 | 73 | 44 |
| Lay by 6 | 380 | 303 | 309 | 324 | 615 | 245 |
| Field edge | 50 | 41 | 12 | 19 | 0 | NR |
| South of lay by 7 | 50 | 25 | 60 | 56 | 103 | 157 |
| Stile | NR | 4 | 4 | 0 | 3 | 0 |
| Lay by 3-4 | NR | 20 | 10 | 33 | 52 | 33 |
| Total | NR | 1454 | 1468 | 1417 | 2185 | 1453 |

NR = not recorded

No measurements were made in September 2000, as heavy rain damaged the plants before survey work could be undertaken.

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

Appendix 2

Plants associated with Wood Calamint and plants which grew from a soil sample taken from behind lay by 6

Ancient woodland indicator species are shown in bold type. Several Wood Calamint seedlings grew from the soil sample.

| | | Lay by 5 | Lay by 6 |
|--------------------------------------|---------------------------------|----------|----------|
| <i>Acer campestre</i> | Field Maple | | x |
| <i>Agrimonia eupatoria</i> | Agrimony | | x |
| <i>Allium ursinum</i> | Ramsons | x | x |
| <i>Anagallis arvensis</i> | Scarlet Pimpernel | x | |
| <i>Anthriscus sylvestris</i> | Cow Parsley | x | x |
| <i>Arctium minus</i> | Lesser Burdock | x | x |
| <i>Arrhenatherum elatius</i> | False Oat-Grass | x | |
| <i>Arum maculatum</i> | Lords-and-ladies | x | x |
| <i>Atriplex patula</i> | Common Orache | x | x |
| <i>Atriplex prostrata</i> | Spear-leaved Orache | x | |
| <i>Brachypodium sylvaticum</i> | Wood False-brome | x | x |
| <i>Bromopsis ramosa</i> | Hairy Brome | | x |
| <i>Bryonia dioica</i> | White Bryony | x | x |
| <i>Campanula trachelium</i> | Nettle-leaved Bellflower | x | x |
| <i>Capsella bursa-pastoris</i> | Shepherd's-purse | x | x |
| <i>Cerastium fontanum</i> | Common Mouse-ear | x | |
| <i>Chenopodium album</i> | Fat-hen | x | |
| <i>Circaea lutetiana</i> | Enchanter's-nightshade | x | |
| <i>Cirsium arvense</i> | Creeping Thistle | x | X |
| <i>Cirsium vulgare</i> | Spear Thistle | x | X |
| <i>Clematis vitalba</i> | Traveller's Joy | x | X |
| <i>Clinopodium vulgare</i> | Wild Basil | x | X |
| <i>Cornus sanguinea</i> | Dogwood | x | X |
| <i>Coronopus didymus</i> | Lesser Swine-cress | x | |
| <i>Corylus avellana</i> | Hazel | x | X |
| <i>Digitalis purpurea</i> | Foxglove | | X |
| <i>Dipsacus fullonum</i> | Wild Teasel | x | x |
| <i>Epilobium obscurum</i> | Short-fruited Willow-herb | x | |
| <i>Euonymus europaeus</i> | Spindle | x | x |
| <i>Eupatorium cannabinum</i> | Hemp-agrimony | x | x |
| <i>Euphorbia amygdaloides</i> | Wood Spurge | x | x |
| <i>Fallopia convolvulus</i> | Black Bindweed | x | |
| <i>Galium aparine</i> | Cleavers | x | x |
| <i>Galium mollugo</i> | Hedge Bedstraw | x | x |
| <i>Geranium robertianum</i> | Herb-Robert | x | x |
| <i>Geum urbanum</i> | Herb Bennet | x | x |

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

| | | | |
|---|-------------------------|---|---|
| <i>Glechoma hederacea</i> | Ground-ivy | x | x |
| <i>Hedera helix</i> | Ivy | x | x |
| <i>Heracleum sphondylium</i> | Hogweed | x | x |
| <i>Holcus lanatus</i> | Yorkshire-fog | x | |
| <i>Hyacinthoides non-scripta</i> | Bluebell | x | |
| <i>Hypericum hirsutum</i> | Hairy St John's wort | | x |
| <i>Hypochaeris radicata</i> | Common Catsear | x | |
| <i>Inula conyzae</i> | Ploughman's-spikenard | | x |
| <i>Lamiastrum galeobdolon</i> | Yellow archangel | | x |
| <i>Lapsana communis</i> | Nipplewort | x | x |
| <i>Lathyrus pratensis</i> | Meadow Vetchling | x | |
| <i>Matricaria discoidea</i> | Pineapple Weed | x | |
| <i>Medicago lupulina</i> | Black medick | | x |
| <i>Melampyrum pratense</i> | Common Cow-wheat | x | x |
| <i>Mercurialis perennis</i> | Dog's Mercury | x | x |
| <i>Moehringia trinervia</i> | Three-nerved Sandwort | x | |
| <i>Mycelis muralis</i> | Wall lettuce | | x |
| <i>Odontites vernus</i> | Red bartsia | x | |
| <i>Plantago major</i> | Greater Plantain | x | x |
| <i>Poa annua</i> | Annual Meadow-grass | x | x |
| <i>Polygonum aviculare</i> | Knot-grass | x | x |
| <i>Polygonum rurivagum</i> | Cornfield Knotgrass | x | x |
| <i>Potentilla reptans</i> | Creeping Cinquefoil | x | |
| <i>Primula vulgaris</i> | Primrose | x | x |
| <i>Quercus robur</i> | Pedunculate Oak | x | |
| <i>Ranunculus ficaria</i> | Lesser Celandine | x | |
| <i>Ranunculus repens</i> | Creeping Buttercup | x | |
| <i>Rosa sp.</i> | a rose (unidentified) | x | x |
| <i>Rosa canina</i> | Dog rose | | x |
| <i>Rubus caesius</i> | Dewberry | x | x |
| <i>Rubus fruticosus agg.</i> | Bramble / Blackberry | x | x |
| <i>Rumex obtusifolius</i> | Broad-leaved Dock | x | |
| <i>Rumex sanguineus</i> | Wood Dock | x | x |
| <i>Sambucus nigra</i> | Elder | x | x |
| <i>Scrophularia nodosa</i> | Common figwort | | x |
| <i>Senecio vulgaris</i> | Groundsel | x | x |
| <i>Silene dioica</i> | Red Campion | x | x |
| <i>Sisymbrium officinale</i> | Hedge Mustard | x | x |
| <i>Solanum nigrum</i> | Black Nightshade | x | x |
| <i>Sonchus arvensis</i> | Perennial Sow-thistle | x | x |
| <i>Sonchus asper</i> | Prickly Sow-thistle | x | x |
| <i>Sonchus oleraceus</i> | Smooth Sow-thistle | x | x |

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005

| | | | |
|------------------------------|------------------------|---|---|
| <i>Stachys sylvatica</i> | Hedge Woundwort | x | x |
| <i>Stellaria holostea</i> | Greater Stitchwort | x | |
| <i>Stellaria media</i> | Common Chickweed | x | x |
| <i>Tamus communis</i> | Black Bryony | x | x |
| <i>Taraxacum aggregate</i> | Dandelion | x | x |
| <i>Teucrium scorodonia</i> | Wood Sage | x | x |
| <i>Torilis japonica</i> | Hedge parsley | | x |
| <i>Trifolium pratense</i> | Red Clover | x | |
| <i>Urtica dioica</i> | Stinging Nettle | x | x |
| <i>Verbascum thapsus</i> | Great Mullein | x | |
| <i>Veronica chamaedrys</i> | Germander Speedwell | x | x |
| <i>Veronica persica</i> | Common Field-speedwell | x | x |
| <i>Viola riviniana</i> | Common Dog-violet | x | x |

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005



Wood Calamint in Flower

Photo Keith Marston



Wood Calamint Site. Lay by 6 in September

Photo Keith Marston

WOOD CALAMINT ON THE ISLE OF WIGHT 1999-2005



Wood Calamint
Photo Keith Marston



Plate 1, Wood Calamint pressed
BHerbarium MOD
Photo Andy Butler



Flowering Plants & Ferns 2005
Epipactis phyllanthes var. *vectensis*
Photo Colin Pope

FLOWERING PLANTS AND FERNS – 2005

Colin R. Pope

There have been some exciting finds this year and Paul Stanley has been particularly active in this respect. The Isle of Wight Helleborine, Prickly Shield Fern, Dense-flowered Fumitory and Slender Bird's-foot Trefoil have all reappeared after a long absence. Well-established populations of two very rare horsetail hybrids have also been discovered. This report refers to some of the more remarkable finds, principally those of native species, archaeophytes and established aliens. 1km square grid references are included in the accounts.

An oddity which does not appear in the list was the discovery of a sea bean (*Entada gigas*) washed up on Shanklin beach at Horse Ledge on 20 January (TJ). This is one of the West Indian drift seeds which very rarely reach our shores, carried in the Gulf Stream. The large, tough seeds are well able to make the trans-Atlantic crossing unaided but they do not germinate in this country, excepting under greenhouse conditions.

Hybrid Horsetail (*Equisetum x willmotii*)

This very rare hybrid between Water Horsetail and Great Horsetail (the fourth British record) was found by Paul Stanley dominating around 50m of roadside verge at Beacon Alley, Godshill, just east of the bridge across the River Yar (5181). It has clearly been present here for a long time. Neither parent was present. Confirmed Pat Acock. New to the Island.

Hybrid Horsetail (*Equisetum x font-queri*)

A strong population of this rare and distinctive hybrid between Marsh Horsetail and Great Horsetail was found on a flushed cliff ledge to the north of Rocken End 4975 (PS). Both parents were present in the general vicinity but Marsh Horsetail was very scarce. Confirmed Pat Acock. New to the Island.

Adder's-tongue (*Ophioglossum vulgatum*)

Found to be growing in quantity in Albany Cemetery, Parkhurst 4989 (PS). This military cemetery is known to contain unimproved neutral grassland but it is so intensively mown that it is remarkable that Adder's-tongue fern has been able to tolerate this management.

Hard Shield-fern (*Polystichum aculeatum*)

Another remarkable find by Paul Stanley at the end of the year. He found five or six plants in Brighstone Forest, at Calbourne Bottom 4284 in a most uninspiring spot beneath secondary scrubby woodland amongst ivy, (confirmed A. Paul). The plants had been rendered slightly more conspicuous by recent forestry operations in the area. Further investigations may perhaps shed light on the possible origin of these plants. Last confirmed from the Island in 1871.

Prickly Poppy (*Papaver argemone*)

Six small plants recorded from the south-western corner of Carisbrooke Castle near the footpath to Froglands Lane 4887 (SB). Not previously recorded from here.

Dense-flowered Fumitory (*Fumaria densiflora*)

There has been no record of this fumitory for well over a hundred years and no herbarium material has been tracked down to support the few earlier records. Therefore, it came as a surprise to find a number of plants making a fine show, growing in a field on Bowcombe Down, alongside of the Tennyson Trail 4687 in a well botanised stretch (PS).

FLOWERING PLANTS AND FERNS – 2005

Annual Knawel (*Scleranthus annuus*)

Recorded from set-aside land south of Presford Farm, east of Shorwell 4682 (PS). Not previously recorded from here.

Night-flowered Catchfly (*Silene noctiflora*)

Over 50 plants were found growing at the top end of Easton Field above Freshwater Bay 3385 (PS), a previously unrecorded site. This field, acquired by the National Trust and arable for well over a century, is being converted to permanent grassland.

Giant Knotweed (*Fallopia sachalinensis*)

Two clumps at the base of cliffs at Shanklin, south of Appley Steps 5880, some stems reaching 2.5m in height, (DD). Not previously recorded from this site.

Hybrid willow (*Salix x multinervis*)

A hybrid between eared willow and grey willow. One bush in Chilton Chine 4082 (JT). The second confirmed Island record.

New Zealand Bitter-cress (*Cardamine corymbosa*)

This alien, first recorded from the Island in 2004, was recorded from a further two sites. A weed in a garden centre at Freshwater, 3487, and naturalised on a gravel path at Flamingo Bird Park, Springvale, 6291. Both PS.

Perennial Wall-rocket (*Diplotaxis tenuifolia*)

A good flowering clump at the inner entrance of Bembridge Fort, 6288 (CL, MW). Last confirmed from the Island in 1966 but appearing more frequently now on the Hampshire mainland.

Wall Pennywort (*Umbilicus rupestris*)

Frequent over approximately 3m on an earth bank alongside a footpath leading onto Row Down, Brighstone 4383 (MB). This is clearly a long-established site which has previously been overlooked.

Rue-leaved Saxifrage (*Saxifraga tridactylites*)

Found at two previously unrecorded sites at Shalfleet: at Shalfleet Manor Farm and on a nearby wall by the Yarmouth Road. Both 4189 (PS).

Sherard's Downy-rose (*Rosa sherardii*)

Plants recorded from the southern end of Bleak Down, 5180; Newmans Lane, Chale Green 4779; and by the side of Town Lane, Chale Green 4880. These may not be native sites. All PS.

Slender Bird's-foot-trefoil (*Lotus angustissimus*)

There have been two likely, but unconfirmed old records of this nationally scarce plant. This year, Geoff Toone discovered a population at the edge of a set aside field south of Presford Farm, Shorwell 4682 (Confirmed Fred Rumsey).

Toothed Medick (*Medicago polymorpha*)

Recorded from the verge of the Newport Road just outside of a garden centre at Apse Heath 5783 a new site (PS).

FLOWERING PLANTS AND FERNS – 2005

Himalayan Balsam (*Impatiens glandulifera*)

Increasingly reported from the Eastern Yar. Abundant alongside of a bend of the River Yar at Redway 5384 (mo).

Early Gentian (*Gentianella anglica*)

2005 was a bumper year for this species, making it a good time to survey previously unrecorded sites. A single plant was found in flower of Brook Down on the early date on 27 March (CP). It was encouraging to find plants in the chalk grassland south of Windy Gap car park, St Catherine's 4975 (CP). There are old records from here but none for a long time. Several locations were found on the north side of West High Down, between Warren Farm and the Coastguard Station 3085/3185 (AM). A previously unknown population was discovered on Cheverton Down, north of Shorwell 4484 in the vicinity of an area subject to active quarrying (CP). There were about 350 plants on the site at Golden Hill, Freshwater 3487, discovered in 2004, (AM).

Common Calamint (*Clinopodium ascendens*)

A single plant seen by the Forest Road, outside Newport 4890 (SB).

Monkeyflower (*Mimulus guttatus*)

A single plant growing in weedy vegetation by the Lukely Brook at Westminster Lane, Newport 4988 (SB).

Green Field-speedwell (*Veronica agrestis*)

Reported as a weed in a garden at Sandford 5481 by the lady who first discovered this plant on the Island when she lived at Sainham, (AC).

Ox-tongue Broomrape (*Orobanche picridis*)

A population of broomrape which appears intermittently on the south facing roadside chalk cutting on Afton Down 3685, has been suspected of being Ox-tongue Broomrape in the past but referees felt unable to confirm this. In 2005 the plant put on a fine show and confirmation of this species was obtained from Fred Rumsey (PS).

Venus Looking-glass (*Legousia hybrida*)

Recorded from an arable field south of Whitecroft 4985 (DB).

A Lawn Lobelia (*Pratia pedunculata*)

Recorded as a lawn weed in a front garden in Galley Lane, Brighstone 4282 (PS). This alien species has not been previously recorded from the Island.

Greater Burdock (*Arctium lappa*)

Reported from a patch of rough ground between Yafford and Limerstone 4482, a previously unrecorded site (MB).

Smooth Cat's-ear (*Hypochaeris glabra*)

Recorded from two previously unknown sites. A set-aside field opposite Presford Farm, Sandy Way, Shorwell, 4682 (GT). Just two plants in a derelict arable field at Brook Hill, 3984 (PS).

Opposite-leaved Pondweed (*Groenlandia densa*)

Found growing in the pond by the Longstone Cottage, Mottistone 4084 (PS).

FLOWERING PLANTS AND FERNS – 2005

Slender Club-rush (*Isolepis cernua*)

Frequent in bare wet ground on a flushed ledge at Rocken End, 4975 (PS).

Distant Sedge (*Carex distans*)

Local in a base-rich flushed ledge at Rocken End, 4975 (PS).

Annual Beard-grass (*Polypogon monspeliensis*)

Frequent on disturbed ground around farm buildings at Redway Farm, 5384 (BS, SB).

Marsh Helleborine (*Epipactis palustris*)

A small population was discovered on the cliff near Warden Point, at the north end of Totland Bay 3287 (PS). The site was subsequently visited by KM who found more plants, suggesting there is a scattered population. Clearly these plants have colonised from Headon Warren cliffs but it is encouraging to report a natural extension of its range.

Green-flowered Helleborine (*Epipactis phyllanthes* var. *vectensis*)

Perhaps the most exciting find of 2005, because this is the orchid originally found at Ventnor and named the Isle of Wight Helleborine at the time. A single flowering plant was growing by the footpath in Eaglehead Copse 5887 (PJ), and confirmed by Professor A.J.Richards. Peter Jupp had first found the plant here, whilst on holiday, two years previously but its identity could not be confirmed. It did not reappear in 2004, so there was great excitement when he once more found it in 2005.

| | | | |
|----|-----------------|----|------------------------|
| AC | Mrs A. Cowley | KM | Keith Marston |
| AM | Anne Marston | MB | Margaret Burnhill |
| BS | Bill Shepard | mo | Botany Group of IWNHAS |
| CL | Chris Lipscombe | MW | Maureen Whittaker |
| CP | Colin Pope | PJ | Peter Jupp |
| DB | David Biggs | PS | Paul Stanley |
| DD | Dave Dana | SB | Sue Blackwell |
| GT | Geoff Toone | TJ | Tony Jeffrey |
| JT | Jesse Tregale | | |

My thanks to everyone who submitted records; not all of them are referred to here.

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MITE GALLS ON THE ISLE OF WIGHT

D T Biggs

Introduction

Many mite galls are common, widespread and easily recognised. However, difficulties with identification to species level and frequent changes in the nomenclature of the mites has militated against the preparation of a paper on this subject until now. With the publication of a catalogue of gall mites by Amrine and Stasny in 1994, and then in 2002 the publication of the new key to British plant galls by Redfern *et al.* the time seemed appropriate to give an account of the present state of knowledge of the mite galls of the Isle of Wight. This follows previous papers on Cynipid wasp galls and Dipteran galls (Biggs 1997, Biggs 1999, Biggs 2003(a), Biggs 2003(b).)

Mites together with ticks constitute the subclass Acari which together with scorpions, pseudoscorpions, spiders and harvestmen make up the class Arachnida. Arachnids, insects, crustaceans, centipedes and millipedes all belong in the phylum Arthropoda. Only two families of mites have gall-causing representatives. These are the Eriophyidae where the great majority of our gall mites belong and the Tarsonemidae which has just one species found locally so far. About 350 species of gall mites are known in central and northern Europe.

Gall-causing mites are essentially microscopic (0.08-0.28mm.) They are elongated creatures with only two pairs of legs except the tarsonemids which have four. Their body is formed of annular segments and their integument bears long setae or bristles. They feed by means of a rostrum which is a piercing and sucking organ. It is the act of feeding which induces gall formation. Males are rare and parthenogenesis frequent. Most gall mites overwinter in buds or in protected sites nearby. The forms of the gall induced are specific to the species of mite. All the young above-ground organs of a plant can be attacked, especially the buds and leaves. Mite galls are generally simple structures, not comparable in complexity to, for example, the galls caused by Cynipid wasps. Gall mites produce six main forms of gall:-

- (1) Virescence or phyllanthly where the organs of a flower, pistil, stamens, petals and sepals are transformed into small green leaves.
- (2) Small witches' brooms can result from bud proliferation and internode shortening.
- (3) 'Big bud' formation where a bud is enlarged and fails to open or develop.
- (4) Erinea - mats of epidermal hairs forming a felt-like patch on a leaf, where the hairs vary in form, species-specific to the mite not the host plant.
- (5) Hollow structures on a leaf formed by hypertrophied growth around the area punctured by the mite in its feeding. These can take various forms - pocks, pustules, tubercles, nails, blisters and pouches.
- (6) Leaf-edge roll galls where one surface of the leaf grows very much more than the other and the leaf blade curls over and covers the mites.

The effect of gall mites on buds can cause serious crop damage as in *Citrus* trees around the Mediterranean and the mites can also act as vectors for damaging virus diseases as in Black Currant. The present paper gives an account of the structure and distribution of mite galls recorded on the Isle of Wight during field-work undertaken between 1975 and 2006. It supplements the original work of Swanton published in the Proceedings for 1937.

Nomenclature of the galls follows Redfern, Shirley and Bloxham (2002) which itself is based on that of Amrine and Stasny. Plant names follow Stace (1997.) Houard (1908) and Buhr (1964) gave each described gall a number even when the causer could not be determined. Three of the galls in the following account have Buhr numbers and no name. One gall described by Swanton is not recorded in Buhr but is described and numbered by Houard.

MITE GALLS ON THE ISLE OF WIGHT

Acalitus brevitarsus (Fockeu) on Alder, *Alnus glutinosa*

One of three common mite galls on Alder, this one is an erineum on the lower surface of the leaf. The hairs are white initially, becoming tawny brown later in the season. Slight convex bulges on the upper leaf surface correspond to the underlying erineum. Common now on the Island it is surprising that this gall was not recorded by Swanton.

Acalitus calycophthirus (Nalepa) on Birch, *Betula spp.*

The various 'Big Bud' deformities are caused by mites and the one on Birch was not recorded by Swanton. So far it has only been recorded once, from Northwood Cemetery 26.4.03. The bud is enlarged up to 10mm in diameter and the outer scale leaves are enlarged, markedly thickened and brown. Mike Cotterill found the one example of this gall during a Botanical Section Meeting.

Acalitus longisetosus (Nalepa) on Birch, *Betula spp.*

The gall of this mite is an erineum, usually on the upper side of the leaf with a corresponding bulge on the lower surface. The hairs of the erineum are bright carmine pink when young and form a felt-like patch between veins. Microscopy reveals the hairs to be short and mushroom-shaped. Swanton did not record this gall and I have only one record, from Afton Marsh in 1994.

Acalitus rudis (Canestrini) on Birch, *Betula spp.*

Although described in the new key to British plant galls as the commonest mite gall on Birch leaves, this was not described by Swanton and there are only seven recent records. This mite induces a beautiful dark reddish-brown erineum on the lower leaf surface which on microscopy is seen to consist of long epidermal hairs which have a club-shaped ending.

Acalitus stenaspis (Nalepa) on Beech, *Fagus sylvatica*

Here the gall is a marginal roll gall on the leaf. The entire length of the leaf margin can be affected by this tight and very narrow upward roll which is lined with hairs amongst which the mites live. Swanton did not record this gall but one can be expected to find it now wherever mature Beech trees are found and even occasionally in Beech hedges.

Aceria aceriscampestris (Nalepa) on Field Maple, *Acer campestre*

The 'Nail Galls' on Sycamore and Field Maple can sometimes be difficult to identify to species. However this mite causes the common multiple small bright red galls on the upper surface of leaves of Field Maple. The galls are 1-3mm in height and have a rounded apex and open on the under surface. This gall was known to Swanton as *Eriophyes macrorhynchus*. It is common across the north of the Island.

Aceria artemisiae (Canestrini) on Mugwort, *Artemisia vulgaris*

I have only two specimens of this gall which I suspect has been frequently overlooked. The galls are tiny reddish pustules or pimples on the upper surface of the leaf, each with an opening below surrounded by white hairs. The galls are only 1-2mm high, and hemispherical although apparently they can sometimes be stalked. Swanton had one record, from Borthwood.

Aceria brevipes (Nalepa) on Sea Purslane, *Atriplex portulacoides*

This mite causes tiny pustules 0.5-1.0mm across on the leaves. Roger Herbert first found this gall in September 2003 on Norton Spit. The gall was not described until 1953 having been first found in northern Spain. The first British record came from Essex in August 2003. I have since found this gall also at Newtown and on the Medina.

MITE GALLS ON THE ISLE OF WIGHT

Aceria campanulae (Lindroth) on Bellflowers, *Campanula spp.*

In Swanton's 1937 paper a leaf-edge roll gall on Clustered Bellflower, *Campanula glomerata* was described as having been found on Brook Down by Barbara Waite. There have been no further records of this gall. The mite apparently can also produce erineum on the leaf blade and petiole.

Aceria centaureae (Nalepa) on Knapweeds, *Centaurea spp.*

This mite induces oval pocks or pustules c. 2mm across within the substance of the leaf, projecting slightly both above and below and with an opening on the upper surface. Initially pale yellowish-green the galls can become red or purple at maturity. Swanton had one record of this gall, made by Frank Morey in 1922 from Bowcombe Down. It is now found frequently, on Greater Knapweed, *Centaurea scabiosa* on our chalk grasslands. I have found similar galls on Saw-wort, *Serratula tinctoria* but whether these are caused by the same species of mite or some other is as yet unknown.

Aceria cephaloneus (Nalepa) on Sycamore, *Acer pseudoplatanus*

Swanton knew this gall as *Eriophyes macrorhynchus*, considering the multiple small red nail galls on Sycamore and Field Maple to be caused by the same mite. They are now believed to be two different species and this mite on Sycamore is found on the Island almost wherever the tree itself grows.

Aceria cladophthirus (Nalepa) on Bittersweet, *Solanum dulcamara*.

There have been only two records of this gall. Sue Blackwell and Bill Shepard found two plants galled on St Helen's Duver 17.8.02 and Colin Pope found the other example in Fairlee Cemetery 23.9.04. The gall consists of a group of neighbouring flowers covered in white hairs and with the floral parts transmuted into small green leaves, a phenomenon known as phyllanth. The affected flowers are agglomerated together to form a spherical mass of leaves and terminal shoots effectively resulting, in the first example found, in a small witches' broom. A similar gall can be found on tomato, *Lycopersicon esculentum*.

Aceria crataegi (Canestrini) on Hawthorn, *Crataegus monogyna*

These galls are pocks on the leaf which open below, initially pale green then reddening at maturity and turning brown. They were not recorded by Swanton and are still local in distribution although common at some sites. As with many galls they can be found easily one year and then not found again for several.

Aceria erineus (Nalepa) on Walnut, *Juglans regia*

Wherever I have found Walnut on the Island I have found this gall to be present. It was not recorded by Swanton. A galled leaf demonstrates a convex yellowish bulge on the upper surface, up to 10mm in diameter and 3-5mm high. In the corresponding cavity on the lower leaf surface the mites live amongst fawn-coloured hairs.

Aceria eriobius (Nalepa) on Field Maple, *Acer campestre*

This is an erineum on the lower leaf surface, initially a shining creamy-white and developing later to a reddish-brown colour. The layer of hairs is quite thin and there is no sign of this gall from above. Although the similar gall on Sycamore was recorded in Swanton's list, this gall on Field Maple was not. It is now common wherever *Acer campestre* is found.

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Aceria fagineus (Nalepa) on Beech, *Fagus sylvatica*

These galls are erinea formed on the underside of the leaf in oval patches between the veins. Initially white, the hairs turn pink then red then brown. Not recorded in Swanton's list, these galls are now widespread on the Island but not common.

Aceria filiformis (Nalepa) on Elm, *Ulmus spp.*

Brown pock or pustule galls 3mm across on the underside of the leaf with a thickened margin, their presence is made noticeable by a corresponding pale yellowish-green discolouration on the upper surface opposite them. Swanton did not record these galls and since 1975 there have only been seven reports and none since 1993.

Aceria fraxinicola (Nalepa) on Ash, *Fraxinus excelsior*

At Hurst Stake SZ5090 on 25.7.2005 I found one gall of this mite on a leaflet of Ash. The gall is a pointed very dark green pustule 1.5 mm. high and 2-3 mm. across, on the upper leaf surface and surrounded by a pale yellow patch 8 mm. in diameter, and growing from one of the side veins. This is the only record of this gall on the Island, which is reported to be rare nationally.

Aceria fraxinivorus (Nalepa) on Ash, *Fraxinus excelsior*

Best seen silhouetted against a winter sky when the leaves have fallen, this gall is unlike all other mite galls in England. The mite induces gall formation in the flowers resulting in their development into an irregular dark brown lignified mass. This very conspicuous gall was not recorded by Swanton and the first record was from Mottistone Mill and made by Dorothy Frazer in 1983. It has now been found in 54 tetrads.

Aceria galiobius (Canestrini) on Bedstraws, *Galium spp.*

There is one record of this gall, from Knighton Down where Colin Pope found two galled flowers on Lady's Bedstraw, *Galium verum* 6th July 1996. The gall consists of a black and thickened pedunculated oval chamber lined with hairs and filled with mites, opening at the top. It is formed from the flower and can reach 15mm by 8mm in size.

Aceria genistae (Nalepa) on Broom, *Cytisus scoparius*

This mite causes the formation of small witches' brooms up to 20mm across, grey and pubescent, at the nodes on the stem, from the leaves which remain stunted and are grossly wrinkled. Within the mass of malformed leaves live vast numbers of the mites. There were no records from Swanton's time and I have only three recent records, two from garden varieties and only one from native Broom, from St. George's Down where the galls were much smaller.

Aceria heteronyx (Nalepa) on Field Maple, *Acer campestre*

Mike Cotterill discovered this nationally rare gall in Atkies Copse, Ningwood on 11.3.2006. Two bare trees of Field Maple showed small annular galls at the bases of first year twigs. The galls were pale brown, warty and irregular in appearance, and corky in consistency. Closer examination revealed the growths to be groupings of individual galls 1-2mm. in diameter in the form of a ring encircling the base of the twig. Microscopy revealed the mites.

Aceria ilicis (Canestrini) on Holm Oak, *Quercus ilex*

This is another mite gall, conspicuous and now widespread on the Island which has probably only arrived here relatively recently. It was not recorded by Swanton in his 1937 paper and the first record was from Fort Victoria in 1984. The mite induces a golden coloured erineum on the underside of the leaves. In the last few years so I have noticed that at some sites the upper leaf surface overlying the erinea is markedly deformed by a raised and thickened pouch-like outgrowth and

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that occasionally the erineum is on the upper surface of the leaf. In southern Europe this mite also galls the catkins and the trees on Ventnor Down would be a likely site.

Aceria iteinus (Nalepa) on Sallows, *Salix spp.*

A nail gall 2-4mm high on the upper surface of the leaves of Goat Willow, *Salix caprea*, Grey Willow, *Salix cinerea* and their hybrids, with a corresponding projection below; slightly irregular in form, red in colour and only ever a few together on a leaf. This is the form taken by the gall induced by this mite. Similar but different mites cause other nail galls on Sallows, and on Osiers. This gall was not recorded by Swanton.

Aceria laticinctus (Nalepa) on Yellow Loosestrife, *Lysimachia vulgaris*

The only record of this gall on the Island was made by Colin Pope 25.7.04 when he found one plant grossly affected at Langbridge Marsh. This record appears to be the first since the discovery of the gall in the 1920s by Bagnall and Harrison. Some of the upper leaves and inflorescences were covered with a thick growth of white hairs. Elsewhere the hairs were purplish or brown. The leaves were stunted, thickened and folded upwards and some flowers were greened and converted into small leaves (phyllanth). Microscopy showed the hairs to be very long and irregular in width, giving a beaded appearance.

Aceria macrochelus (Nalepa) on Field Maple, *Acer campestre*

One of the two nail gall mites on Field Maple, this one causes the production of the larger gall, up to 4mm in height and up to 4mm across, which usually develops in the angles between the midrib and the main veins on the upper leaf surface. The gall is yellowish-green at first, becoming bright red and later brown. It is never numerous on any one leaf. Known to Swanton as *Eriophyes macrochelus*, he had records from Newport and Brook.

Aceria macrorhynchus (Nalepa) on Sycamore, *Acer pseudoplatanus*

Unfortunately there has been a lot of confusion about the nomenclature of the mite-induced nail galls on Sycamore and Field Maple, *Acer pseudoplatanus* and *A. campestre*. This is a relatively large nail gall, up to 6mm in height and pointed at the apex, occurring only ever in small numbers on any one leaf and usually associated with the veins. I only have six records of this gall and I have not seen it since 1997.

Aceria marginemvolvans (Corti) on Mugwort, *Artemisia vulgaris*

This gall was not recorded by Swanton and indeed neither had I recorded it until I was re-examining some of my herbarium material whilst preparing this paper. One leaf collected in 1987 from Shide clearly shows on examination by a hand-lens very narrow tight downward rolls along the edges of several leaflets. Although this gall is described in the contemporary Swedish, French and German literature I can find no reference to it having been found again in England since it was first recorded in 1917.

Aceria nervisequus (Canestrini) on Beech, *Fagus sylvatica*

This mite induces a narrow elongated erineum alongside the side-veins on the upper surface of the leaf. The hairs of the erineum are white initially and fairly conspicuous. Later they turn brown and are then difficult to detect. This gall was not recorded in Swanton's list and neither has it been found very often in the recent past.

Aceria ononidis (Canestrini) on Restharrow, *Ononis repens*

Considering how much Restharrow we have on the Island it is surprising that there are only two records of this gall, one in Swanton's list of 1937 from near Niton, an observation made by Frank

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Morey in 1922; and a record from Mersley Down 14.8.99 by Colin Pope. The gall is an example of the phenomenon of phyllanth, where the floral parts, the stamens and pistil, petals and sepals are transformed into small leaves. In this gall they are also covered with a thick white mass of hairs amongst which the mites are found.

Aceria origani (Nalepa) on Marjoram, *Origanum vulgare*

Strangely, this gall was not recorded by Swanton. The first record was from Brighstone Down in July 1991. From a distance affected plants appear afflicted with grey spots. Closer examination reveals that the flowers and terminal leaves are joined together, thickened and covered with a thick coating of white hairs. Within the enclosed mass of plant tissue live hundreds of mites. A very similar gall is caused by a gall midge but this gall contains red larvae and no mites.

Aceria plicator (Nalepa) on Medicks, *Medicago spp.*

The gall caused by this mite has only been found once on the Island, at Rew Down 7.6.92 by Toni Goodley. The whole inflorescence of one plant of a Medick, probably *Medicago lupulina*, Black Medick was transformed into a mass of tiny, hairy leaflets - phyllanth. Closer observation of more of our smaller plants would perhaps yield more records of this and other galls.

Aceria pseudoplatani (Corti) on Sycamore, *Acer pseudoplatanus*

This mite induces erineum in patches on the under surface of Sycamore leaves. In early summer the hairs are white or pale green, becoming golden-brown then finally reddish-brown by autumn. There is often, especially later in the season, a slight bulge on the upper leaf surface, paler green than the rest of the leaf and giving an indication of the underlying galls. Swanton knew this gall as *Eriophyes macrochelus var. erineum* and had one record, from Newport. Today it is extremely common.

Aceria sanguisorbae (Canestrini) on Salad Burnet, *Sanguisorba minor*

The gall caused by this mite was described by Swanton as being abundant along the downs between Newport and Freshwater. There are recent records from most of our downs but it could not be described as abundant now. The leaves of the plant are thickened and adjoining leaves closely approximated to each other and covered with an extremely dense growth of creamy-yellow hairs within which the mites live. A patch of affected plants is easily noticed.

Aceria schmardaе (Nalepa) on Clustered Bellflower, *Campanula glomerata*

Anne Marston found the only Island example so far of this gall in a chalk pit on the north side of High Down 3.8.98. This is another example of a mite causing phyllanth - the organs of the flowers developing abnormally into very small narrow leaflets instead of into pistil, stamens, petals and sepals. The leaflets are covered with white hairs. This is a very rare gall in England as a whole. The general appearance of the affected plant is that of its bearing numerous tiny witches' brooms at the nodes.

Aceria squalidus (Nalepa) on Small Scabious, *Scabiosa columbaria*

This is another mite which induces phyllanth and an abnormal dense hairiness on its host plant. As well as the flowers being affected, sometimes the terminal leaves are narrowed, rolled up and covered with white hairs. This was not recorded in Swanton's list and I have only two recent sites, the first being Rowborough Bottom where the gall was found by the late Kitty Page in September 1988.

Aceria tenuis (Nalepa) on Grasses, *Poaceae spp.*

Although reported in Redfern *et al.* to be common on many grasses, this gall was not recorded by

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Swanton and there is only one recent record, from Littlestairs Point, Shanklin where Colin Pope found a plant of Cock's-Foot grass, *Dactylis glomerata* 9.9.95. The whole inflorescence was galled, the floral parts of the spikelets green, hypertrophied and taking on the appearance of thin narrow leaves. The mites live within the flowers.

Aceria thomasi (Nalepa) on Wild Thyme, *Thymus polytrichus*

The terminal leaves of the shoot are thickened by this mite and they develop a thick covering of very bright white hairs amongst which the mites live. Swanton considered this gall to be common on downland throughout the Island, giving specific records from St. George's Down and Brook. I have found it in most of our downland tetrads. From a distance an affected patch of plants seems to be covered with tiny balls of cotton wool.

Aceria trifolii (Nalepa) on White Clover, *Trifolium repens*

The only record of this mite gall was made by Swanton when he found an example near Tolt Down. The mite which induces the gall was known to him as *Eriophyes plicator* var. *trifolii*. The gall is another example of phyllanth. Swanton adds that the calyx teeth are elongated and twisted or curled. This mite can also cause a leaf-edge roll gall.

Aceria ulmicola (Nalepa) on small-leaved Elms, *Ulmus* spp.

Very strangely this gall was not recorded by Swanton. It is now almost universal. The gall is a pimple or pustule visible on both sides of the leaf. On the upper surface it causes a tiny rounded swelling 1mm high whilst below there is a corresponding conical hairy projection 1-2mm long emerging from an indentation in the leaf. The galls are usually widely distributed across the leaf surface between the veins, yellowish-green at first, brownish at maturity.

Aceria varius (Nalepa) on Aspen, *Populus tremula*

Not recorded in Swanton's list of Isle of Wight galls, this gall is uncommon still, having been recorded at only three sites. It is reported to be uncommon throughout England as a whole. When present it is exceptionally obvious with the upper leaf surface exhibiting large reddish bulges and the lower surface showing corresponding hollows filled with chestnut-coloured hairs. Under the microscope each hair is seen to be quite short and to end in blunt branched tufts.

Aceria vitalbae (Canestrini) on Traveller's-Joy, *Clematis vitalba*

Another uncommon gall, not recorded by Swanton. This mite affects the terminal leaves of a shoot causing a crumpling effect with the leaf edge rolled upwards. Small discrete patches of very short brilliant white hairs appear on the upper leaf surface. I have only recorded this gall five times and not since 1992.

Aculops acericola (Nalepa) on Sycamore, *Acer pseudoplatanus*

Swanton described the gall caused by this mite as a felt of swollen hairs on the underside of the leaf at the junction of the nervures and had recorded it from Brook as *Phyllocoptes acericola*. Indeed, he had illustrated the gall in his textbook of 1912 where there was described the additional feature of a corresponding upper surface swelling over the nerve junction. I have found this gall only once, at Coombe Plantation, Chessell 19.6.90. Although this gall was listed in Stubbs (1986) it is not included in Redfern who states that the taxonomy of the mites which produce erineae on *Acer* species has yet to be fully sorted out.

Aculus fraxini (Nalepa) on Ash, *Fraxinus excelsior*

Another gall not recorded by Swanton and this gall is still uncommon and when found usually only single examples are seen at any one site. This mite induces a very narrow and tight leaf edge

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roll gall which is barely thickened. As is usual with mite roll galls the interior of the roll is lined with hairs.

Aculus laevis (Nalepa) on Sallows, *Salix spp.*

The nomenclature of the mite causers of pimple-, pustule-, nail- or pouch-galls on *Salix* species is difficult and has undergone several changes. There are three distinct mite species involved. One produces irregular club-shaped pouch galls 2-4mm. high on Sallows *Salix caprea*, *S. cinerea* and *S. aurita*. One produces smaller rounded more regular pustule- or pimple-galls on Osiers *Salix alba*, *fragilis* and *viminalis*; and the present species under consideration here *Aculus laevis* which produces a similar small pustule 1-2mm. high on Sallows. Not one of these mite galls was recorded by Swanton. This gall is now fairly common.

Aculus leionotus (Nalepa) on Silver Birch, *Betula pendula*

This is one of the several mite species which produce erineum on Birch leaves. Microscopy is required to distinguish them. In this species the erineum is on the lower leaf surface and consists of small patches of long chestnut-brown hairs in the angles between the midrib and the main veins. Microscopy reveals them to be blunt-ended. On the upper leaf surface there are corresponding elongated bulges sparsely covered with short silvery hairs. This is another gall which was not recorded by Swanton.

Aculus magnirostris (Nalepa) on Willows, *Salix spp.*

This mite usually causes a tight, extremely narrow (0.5-1.0mm.) upward roll gall on the edge of the leaf, extending to 3-4mm. long. Sometimes however the roll is so short and thick that it resembles a pustule on the edge of the leaf and in these circumstances it turns bright red. The roll or pustule is lined internally with white hairs. This gall is only found on the smooth- and long-leaved Willows rather than on the more rounded- and rough-leaved Sallows. This was not recorded by Swanton. I have records from *Salix fragilis* and *Salix viminalis*.

Aculus tetanothrix (Nalepa) on Willows, *Salix spp.*

Small pustules or tubercles arising from the upper surface of the leaf, just 1-2mm. high, often present in considerable numbers and opening below through an aperture fringed with long white hairs are the galls caused by this mite. It was not recorded in Swanton's list and I have only three records, all on White Willow, *Salix alba*.

Cecidophyes galii (Karpelles) on Bedstraws, *Galium spp.*

This gall will have been seen by everybody but perhaps not recognised as a gall. In high summer any large patch of Cleavers, *Galium aparine* will be seen to have some plants where the leaves are noticeably a paler green, thickened, much narrowed and inrolled and twisted. The roll is hairy inside and the mites live amongst the hairs. The vast majority of records are from *Galium aparine* but there are a few from Hedge Bedstraw, *Galium mollugo*. Swanton who knew this species of mite as *Eriophyes galii* also had records from *Galium verum* and *saxatile* but I have not been able to confirm these hosts recently.

Cecidophyopsis betulae (Nalepa) on Birch, *Betula spp.*

There is only one record of this gall, from Osborne in April 2002. It was not recorded by Swanton. It is extremely inconspicuous and I suspect it has been much overlooked. The gall is a hemispherical swelling 0.5mm. in diameter on the upper surface of the leaf, golden-brown and surmounted by long white hairs. Beneath is a concavity containing the mites.

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Cecidophyopsis psilaspis (Nalepa) on Yew, *Taxus baccata*

The more common bud gall on Yew is the 'Artichoke gall' of the gall midge *Taxomyia taxi*. However, this mite causes a more typical 'Big Bud' effect but is much less common, having been found in only three sites and not recorded in Swanton's list. The bud is spherical and enlarged up to 10mm. in diameter, is pale green in colour and consists of thickened succulent embryonic leaves amongst which live many thousands of the mites.

Cecidophyopsis ribis (Westwood) on Black Currant, *Ribes nigrum*

This mite is probably a widespread pest and I am sure the distribution map grossly underestimates its extent on the Island. Strangely, it was not recorded by Swanton and the two recent records are from wild plants. Both terminal and lateral buds can be affected, resulting in a spherical 10mm. diameter swelling which contains the mites, fails to open and eventually turns brown and shrinks.

Epirimerus trilobus (Nalepa) on Elder, *Sambucus nigra*

This is another leaf edge roll gall, barely thickened and recognisable only with difficulty because the amount of leaf tissue rolled over is often only about 0.5mm. in width and often only extends for about 2mm. along the edge of the leaf. In early summer however it is distinctly paler than the rest of the leaf. Sometimes the leaf-blade is wrinkled. This gall was not recognised by Swanton.

Eriophyes arianus (Canestrini) on Whitebeam, *Sorbus aria*

Swanton recorded this gall as *Eriophyes piri* from near Tolt Down. I have only two recent records. The gall when found occurs in large groups. Each gall is a brown pock 1mm. across, found on the underside of the leaf, in groups between the veins. On the upper leaf surface is a corresponding bright yellow spot in the middle of which is a tiny aperture around which can develop a bright purple colouration.

Eriophyes canestrinii (Nalepa) on Box, *Buxus sempervirens*

There is so far only one record of this gall which causes phyllanthry of the flowers of Box. A bush in a hedgerow at Langbridge, Newchurch was noticed on 9.11.2005 to have three deformed fruits containing thick fleshy stamens and stigmas which themselves had cavities in which the mites were still present.

Eriophyes convolvens (Nalepa) on Spindle, *Euonymus europaeus*

This is a leaf-edge roll gall which is easily recognised. The edge is rolled upwards, narrowly and tightly, and often affecting much of the leaf margin. It is distinctly different in colour to the rest of the leaf, usually a distinctive pale lime-green but occasionally a carmine red. Swanton had one record, from Cheverton Farm, Shorwell but now this gall is widespread and common.

Eriophyes diversipunctatus (Nalepa) on Aspen, *Populus tremula*

This mite and its gall are described as rare by Redfern *et al.* I have never seen it. It is not recorded in Swanton's published list. John Robbins, the recording officer of the British Plant Gall Society unearthed an unpublished manuscript note by Swanton to the effect that Frank Morey had found this gall at King's Quay. It is described as an irregular, rounded and reddened swelling at the base of the leaf, 1-4mm. across, on the upperside and without an obvious opening below, usually one being present on each side of the midrib.

Eriophyes exilis (Nalepa) on Lime, *Tilia spp.*

The first Island record of this gall was made by Dr. Brian Spooner, of Kew, at Ryde 31.10.84. It was not recorded by Swanton. The gall consists of a hairy hemispherical swelling 2mm. in diameter on the upper leaf surface in the axils of the veins whilst below there are corresponding swell-

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ings pinkish-brown in colour, covered with long white hairs which surround an opening or ostiole. I have recorded this gall from *Tilia platyphyllos* and *Tilia x europaea*.

Eriophyes inangulis (Nalepa) on Alder, *Alnus glutinosa*

Swanton described this gall as common and recorded it from King's Quay, Brook etc. In his day it was known as *Eriophyes axillare*. The gall is a pustule or tubercle 5mm. x 2mm. which arises on the upper surface of the leaf in the angles between the midrib and the main veins, occurring either alternately or in pairs on either side of the midrib. Initially yellow the galls later turn orange, then purple then brown. In corresponding positions on the lower leaf surface are patches of long yellow hairs which project from within the hollow of the tubercle.

Eriophyes laevis (Nalepa) on Alder, *Alnus glutinosa*

This is a hemispherical or club-shaped pouch gall, 1-3mm. high appearing on the upper surface of the leaf. When present it is usually found in large numbers randomly distributed across the leaf-blade, initially yellowish then green and finally brown. It projects below the lamina of the leaf where there develops a rather pouting opening. Swanton had records from Brook and Shorwell.

Eriophyes leiosoma (Nalepa) on Lime, *Tilia x europaea*

Common and widespread now on the Island whereas not recorded by Swanton, this mite induces very noticeable erineae on the under surface of the leaf between the veins, in roughly circular patches 5-10mm. in diameter and creamy-white in appearance. Although there is no corresponding bulge visible on the upper leaf surface there is present a slightly discoloured patch. Microscopy reveals the hairs of the erineum to be spirally coiled and blunt-ended.

Eriophyes lissonotus (Nalepa) on Silver Birch, *Betula pendula*

Of the several mites which induce erineae on Birch leaves this one causes the leaf to produce patches of long unicellular epidermal hairs in the angle of the veins on the lower leaf surface and a corresponding bulge on the upper surface which is itself much more sparsely hairy. The hairs themselves are long, straight, white and pointed. This gall was not recorded by Swanton but Redfern *et al.* make the point that Birch mite taxonomy is complex and not fully sorted out. I have only five records of this gall.

Eriophyes nervalis (Nalepa) on Lime, *Tilia spp.*

Swanton had one record of this gall, from Brook on *Tilia x europaea*. He knew the mite as *Eriophyes tiliae* var. *liosoma* and described it as a felt of hairs bordering the veins on the under surface of the leaf. The veins are slightly thickened. The hairs are short and thick, white at first then red or brown. I have not seen this gall.

Eriophyes obiones (Molliard) on Sea Purslane, *Atriplex portulacoides*.

Although the galls caused by this mite are very small (4mm. x 1mm.) they are quite noticeable when present because of their attractive purplish-grey colour. They occur as fusiform swellings on the floral axes of this salt-marsh plant. On sectioning and viewing through the microscope the galls are seen to contain thousands of the mites. This gall was unknown to Swanton and indeed is not described in the new keys. So far it has only been recorded from six sites on the Island, Anne Marston finding the first example at King's Quay in 2003.

Eriophyes padi (Nalepa) on Blackthorn, *Prunus spinosa*.

There are two different mite-induced pustule galls on Blackthorn. Although both are common and quite noticeable they have distinct differences. This species of mite results in the formation of up-

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per-surface leaf pustules which open below and which are most often found clustered along the midrib. Initially pale yellowish-green the galls sometimes become deep red. Swanton recorded this gall from Brook.

Eriophyes prunispinosae Nalepa on Blackthorn, *Prunus spinosa*.

The pustules of this mite are found gathered along the leaf margin, extending both above and below the leaf surface and with the opening above. In Swanton's list this mite was called *Eriophyes similis* and he recorded it from Nodgham Lane, Carisbrooke. It is now common and widespread.

Eriophyes pyri (Pagenstecher) on Pear, *Pyrus communis*.

Although this mite and its gall were not recorded in Swanton's published list of 1937 I found a specimen in Haselemere Museum on a visit there in May 2003. It had been found by Frank Morey at Whippingham in 1924. There are only two recent records but I suspect that it is present in many gardens but unrecognised. Each gall is a biconvex swelling 1-2mm. across in the substance of the leaf and usually present in great numbers. Initially the pock-like galls are yellow, becoming later pink, purple then black. This mite is known to horticulturalists as the pear leaf blister mite.

Eriophyes rubiae (Canestrini) on Wild Madder, *Rubia peregrina*.

Houard (1909) describes this gall as being a downwards roll gall on the leaf margin. It looks very similar to the corresponding gall on *Galium* species. Indeed when first I found examples on Wild Madder at Bouldnor in 1989 I misattributed them to *Cecidophyes galii* partly because the literature since Houard did not describe this gall. It was not recorded by Swanton and there are only three recent records.

Eriophyes similis (Nalepa) on Plum, *Prunus domestica*.

This gall is similar to *E. prunispinosae* which occurs on Blackthorn. It is a leaf-edge pustule which extends both above and below the leaf surface. In Swanton's time the two species were not differentiated. I have records now from Plum, Bullace and Greengage.

Eriophyes sorbi (Canestrini) on Rowan, *Sorbus aucuparia*.

The pock galls caused by this mite appear very similar to those of *E. pyri* on Pear. They are biconvex pustules arising from within the substance of the leaf and visible and palpable on both surfaces. They are 1-2mm. across, yellow initially or pale green, later reddening then turning purple or brown. Similar galls are found on other *Sorbus* species. This gall was not recorded by Swanton.

Eriophyes tiliae (Pagenstecher) on Limes, *Tilia* spp.

This mite causes 'Nail' galls which can be very numerous on the upper surface of the leaves of Lime, *Tilia x europaea* and large-leaved Lime, *Tilia platyphyllos*. Each gall can be 10-15mm. high, is conical and tapers to a pointed tip. It can be erect, oblique or curved, is smooth on the outside and is hairy within where the mites live. The gall is initially yellowish-green and when mature, in July - August it turns dark red. Swanton had records from Newport and Brook.

Eriophyes torminalis Nalepa on Wild Service-tree, *Sorbus torminalis*.

This mite induces the formation of multiple small pocks on the leaves, often grouped together in concave depressions on the upper leaf surface and resulting in an obvious bulge on the corresponding lower surface, the bulges being about 12mm. across. Each individual pock is about 1.5mm. across, developing in the leaf substance and usually opening downwards, and is golden yellow in colour. Swanton had records from King's Quay and from Whippingham.

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Eriophyes viburni (Nalepa) on Wayfaring-tree, *Viburnum lantana*.

Here the galls are larger, up to 3mm. across and 3mm. high, effectively pustules or small pouches usually on the upper surface, dark red and thinly covered with white hairs, opening below. This opening may itself be surrounded by an obvious bulge and is thickly surrounded by long white hairs. Swanton did not record this gall but today it is fairly common.

Phyllocoptes coryli Liro on Hazel, *Corylus avellana*.

There has been considerable confusion over the identification and recording of this gall. Swanton did not record it. In Darlington (1968) it was not differentiated from *Phytoptus avellanae*. Stubbs (1986) did not mention it. The mite causes a deformity in the male catkin. The whole catkin is enlarged and noticeably thicker than usual. The scales are of varying sizes, many grossly enlarged. There is another catkin gall on Hazel caused by a gall-midge *Contarinia coryli* and accurate identification of the two gall causers requires microscopical examination. As a result of these difficulties there are only two certain records of this gall, the first being made by Anthony Mitchell in 1987 from Newchurch.

Phyllocoptes gibbosus (Nalepa) on Bramble, *Rubus fruticosus*

This mite induces an erineum on the upper surface of the leaf. There is only one record of this gall, from Firestone Copse on 13.3.2005. The erineum may also occur on the stems, flower stalks, flowers or fruit.

Phyllocoptes goniothorax (Nalepa) on Hawthorn, *Crataegus monogyna*.

Extremely common and widespread yet somewhat difficult to notice, this gall is a short marginal leaf roll. The edge of the leaf is thickened and folded downwards over a length of about 5-10mm. It is pale yellowish-green in colour, sometimes reddening later in the season. The interior of the roll is filled with white hairs and contains the mites. Swanton described this gall which he knew as *Eriophyes goniothorax* as very common and the same could well have been said for the years 1975 - 1992. However, unexpectedly and without explanation this gall has been only rarely found in the last two years.

Phyllocoptes mali (Nalepa) on Apple, *Malus domestica*.

Surprisingly, there are only two records of this gall. Swanton did not record it. Maureen Whittaker first noticed it on a tree in Seaview in June 2004. The leaves were covered with raised pustules especially along the leaf edge. Each pustule was green and 2mm. high, extending both above and below the leaf surface. The opening was more often below than above and was a wavy elongated slit surrounded by carmine hairs.

Phyllocoptes malinus (Nalepa) on Crab Apple, *Malus sylvestris*.

This extremely attractive gall has only been found so far in four tetrads. It was not recorded by Swanton. Bright carmine patches of hairs on the lower surfaces of the leaves are startling in their appearance and shelter the mites. Eventually the hairs turn a rich golden-brown.

Phyllocoptes populi Nalepa on Aspen, *Populus tremula*.

Causing obvious yellow pouch galls on the upper leaf surface up to 5mm. across and 3mm. high, each with a very deep concavity beneath and lined with chestnut-brown hairs, this mite was not recorded by Swanton and there are only three recent records.

Phyllocoptes sorbeus (Nalepa) on Rowan, *Sorbus aucuparia*.

With only one recent record, from Kingston, East Cowes and no record from Swanton's time it is interesting to understand from the literature that this gall is reputed to be rare in the south of the

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British Isles but widespread and common in Northern England and Scotland. The gall is an erineum of dense hairs on either the upper or lower leaf surface, the hairs changing in colour with time from white to pink.

Phytoptus avellanae Nalepa on Hazel, *Corylus avellana*.

This mite causes a typical "Big Bud" gall. The more or less spherical gall can reach 10mm. in diameter, has thickened and somewhat warty bud-scales, fails to open and contains hundreds of mites. Swanton recorded this gall from Newport and Brook and it is now fairly widely distributed. He knew it as *Eriophyes avellanae* and until recently this mite was considered to be the causer also of the deformed catkins now known to be caused by *Phyllocoptes coryli*.

Phytoptus tetratrichus (Nalepa) on Lime, *Tilia spp.*

First found on the Island on 18.10.05 in Freshwater, there has been only one subsequent record, from Big Mead at Shanklin. The gall is a leaf pustule situated on the upper surface, 3 mm. across and 1.5 mm. high, with a concavity on the lower surface filled with long beige hairs.

Stenotarsonemus phragmitidis (Schlechtendal) on Common Reed, *Phragmites australis*.

An internode is transformed into an elongated and twisted, wrinkled and longitudinally grooved gall with the epidermis flaking off to reveal a dark brown centre. Microscopy reveals many hundreds of mites not of the family Eriophyidae with only two pairs of legs but of the Tarsonemidae with four pairs. This gall was not recorded by Swanton.

Vasates quadripedes Shimer on Silver Maple, *Acer saccharinum*.

This gall was new to Britain when first found in Essex in 2000. Each gall is a relatively large and obvious pustule or small pouch on the upper leaf surface, usually on a vein, 2-5mm. in height, irregular in shape with a wrinkled surface and pink to reddish-purple in colour. Known in the U.S.A. as the Maple Bladder Gall it is apparently common and familiar there. I found this gall at the Medina Arboretum at Fairlee 29.9.03 and this proved to be only the fourth British record.

Unnamed gall mite Buhr No. 56 on Sycamore, *Acer pseudoplatanus*.

The erineum of *Acer pseudoplatani* on Sycamore are common and widespread. They are large patches of white hairs distributed randomly over the lower surface of the leaf and noticeable because they are associated with a distinct yellowish bulge on the upper surface corresponding to each erineum below. Buhr's gall No.56 is similarly an erineum but found initially in the angles between the veins and the midrib then extending outwards across the lower leaf surface, at first white then red then brown, with no evidence of a bulge on the upper surface. The hairs on microscopy are toadstool-shaped. This gall was first found at Toll Bar Plantation, Hulverstone 18.8.04 by Jim Chiverton, Bill Shepard and myself. It was not recorded by Swanton and is not described in Redfern *et al.*

Unnamed Gall Mite Buhr No. 6281 on Wild Basil, *Clinopodium vulgare*.

Margaret Burnhill and Jackie Hart came across this gall on Brighthstone Down 17.8.01. The gall consists of small discrete creamy-white erineum on the undersides of the leaves, especially associated with the veins. The hairs are short, broad and rather flattened against the leaf surface. This gall is described in the German, French and Dutch literature but is not mentioned by Redfern *et al.* It was not recorded by Swanton. An *Eriophyes* species was recorded by Burkill as galling this host in a list of British gall mites published in the London Naturalist in 1930 but with no description of the gall.

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Unnamed Gall Mite Buhr No. 7327 on Elm, *Ulmus sp.*

A rather strange Elm which appeared to be a hybrid between Wych Elm *Ulmus glabra* and English Elm, *Ulmus procera* in Parkhurst Forest showed curious white erineae along the midrib and main veins on the underside of the leaves. On microscopy the hairs were seen to be somewhat sparse but immensely long and narrow-tipped. Many eriophyid mites were seen amongst the hairs. Redfern *et al.* do not describe this gall but Buhr records it from "*Ulmus carpinifolia, laevis* and *scabra*."

Unnamed Gall Mite on Daisy, *Bellis perennis*.

Swanton in his 1937 paper described a flower head of Daisy "transformed into a swollen compact rounded mass with deformation of the organs" caused by mites and found by Miss M. Read in 1923 at Carisbrooke. Houard (1909) described a similar gall but attributed it only to an unnamed eriophyid. Dauphin and Anlotsbehere (1993) describe "Capitules Déformés" from France and ascribe the deformity similarly to an eriophyid mite. I can find no reference to such a gall elsewhere in the literature; particularly it is not described by Bagnall and Harrison in their several papers on mite galls. There have been no further records of this gall.

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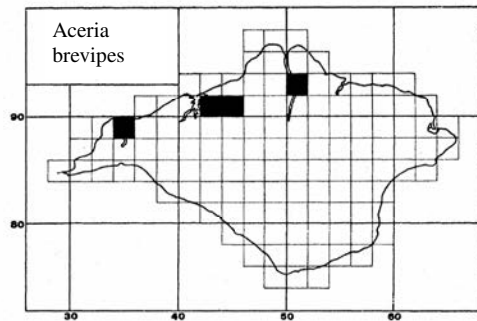
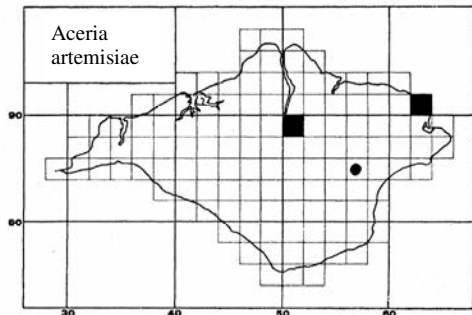
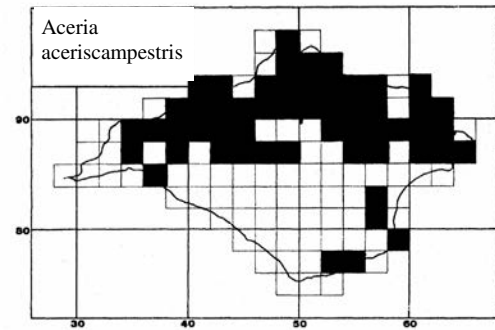
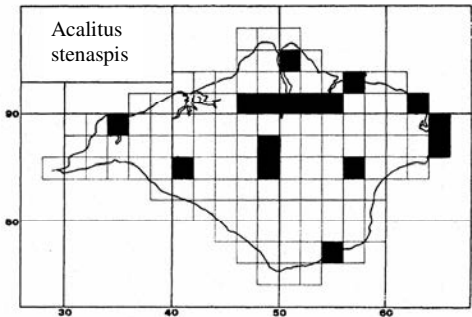
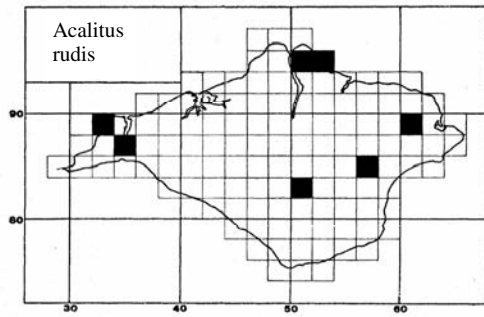
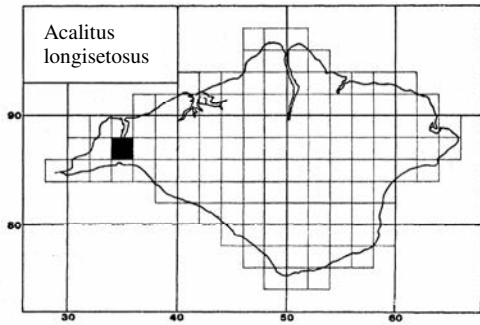
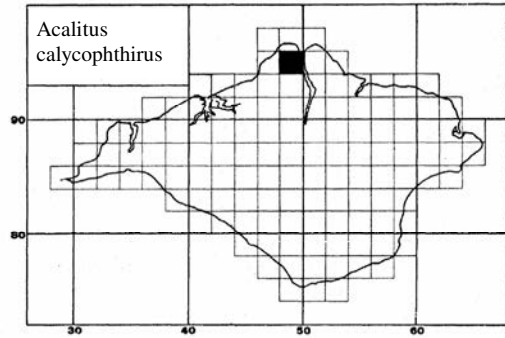
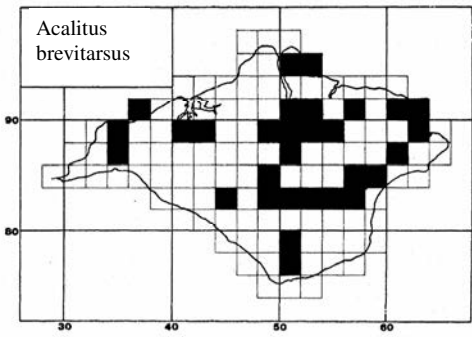
Author. Dr. D.T. Biggs, Plum Tree Cottage, 76 Albert Road, Gurnard, Cowes, Isle of Wight
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Distribution Maps

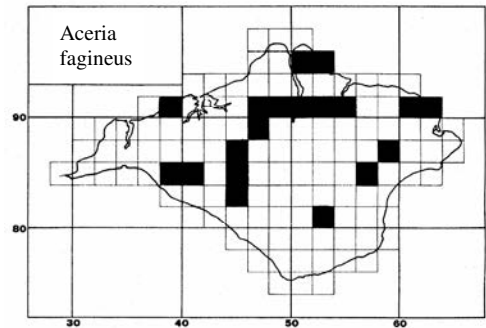
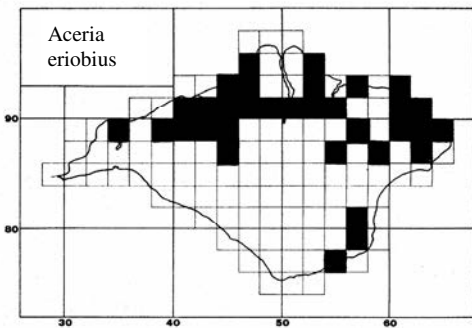
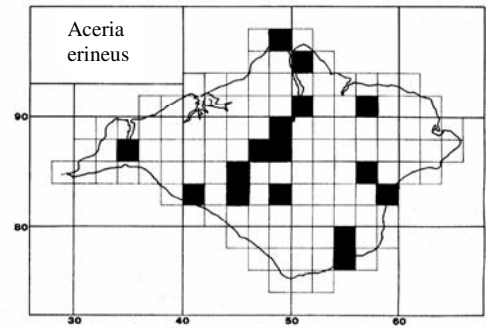
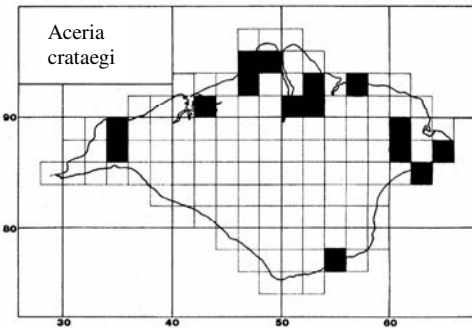
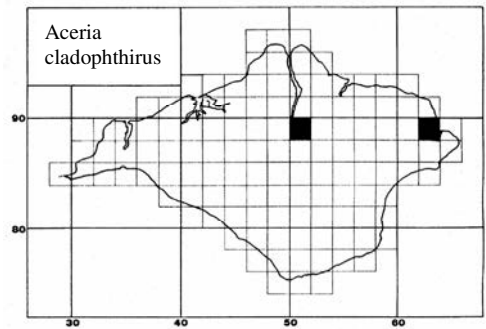
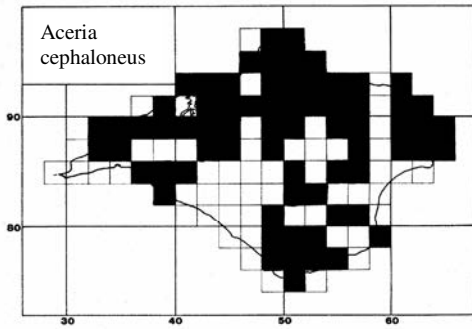
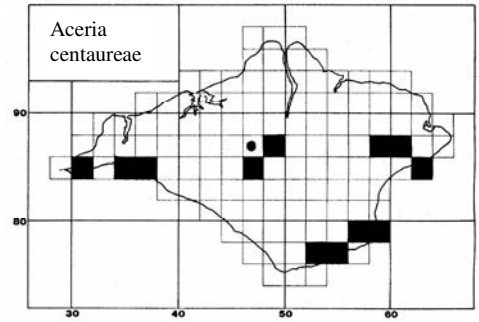
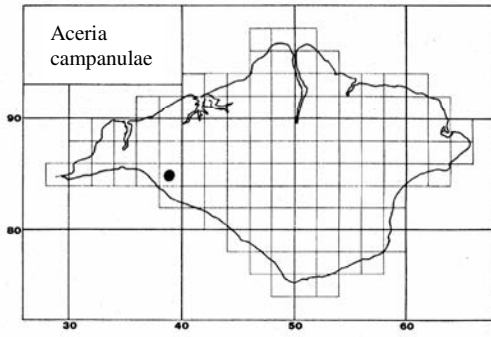
The distribution maps show the occurrence of gall-causing mites based on field-work carried out between 1975 and 2006.

Key :- ■ Swanton (1937) records where not recently confirmed.
 ● Recent records.

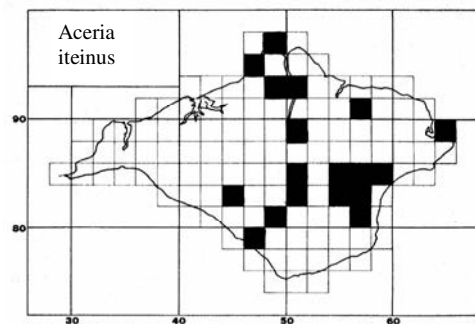
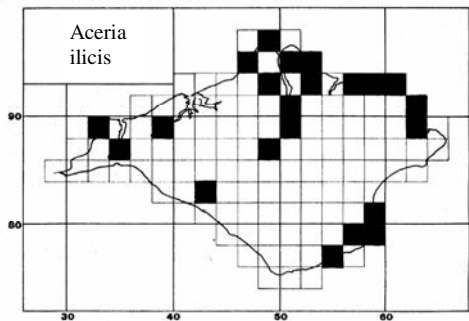
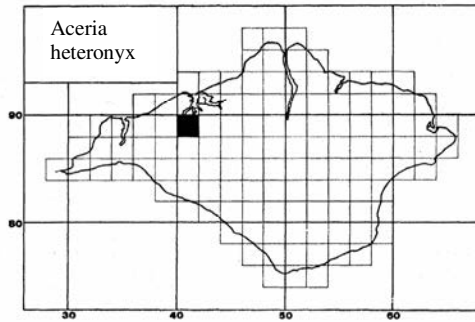
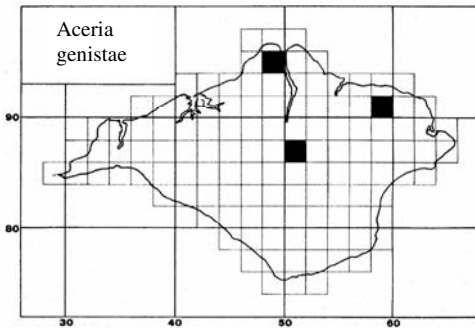
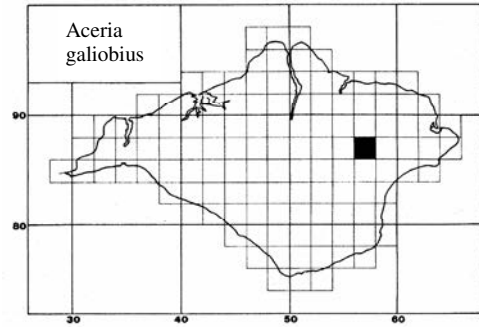
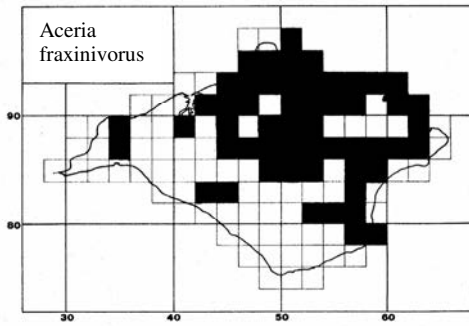
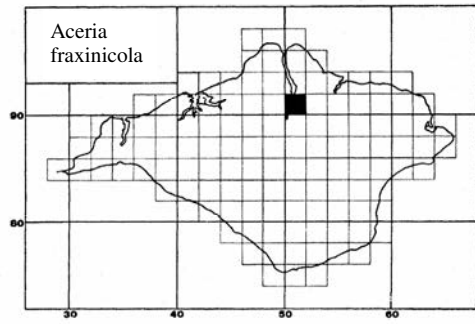
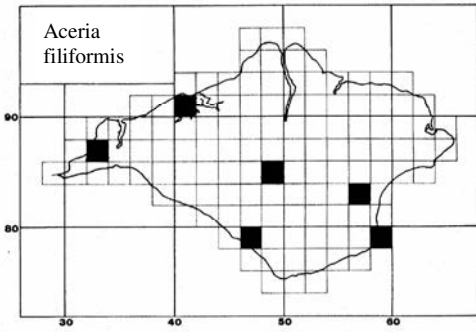
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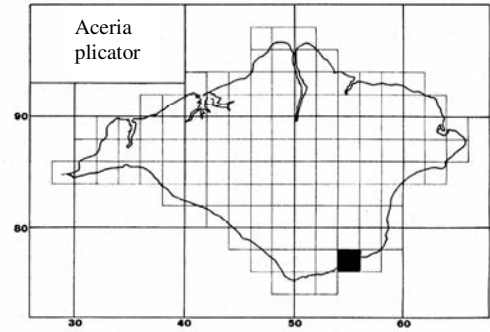
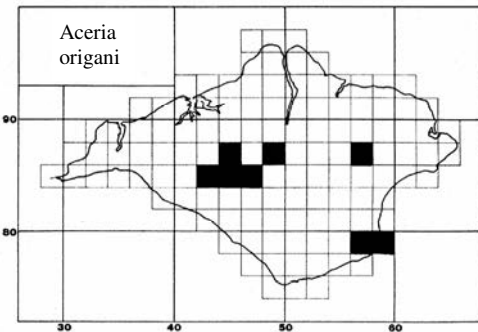
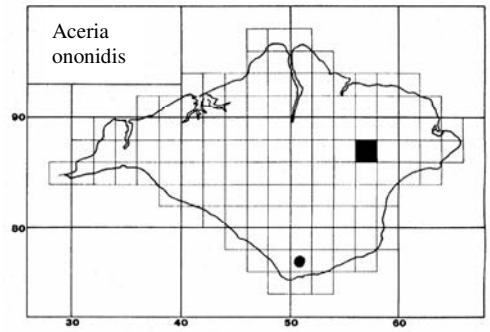
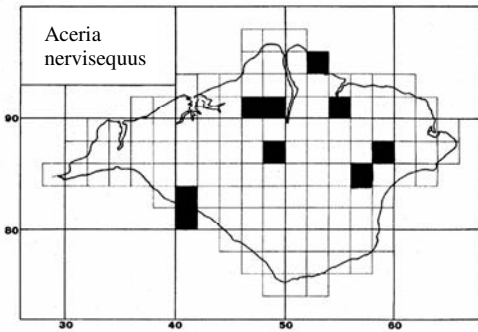
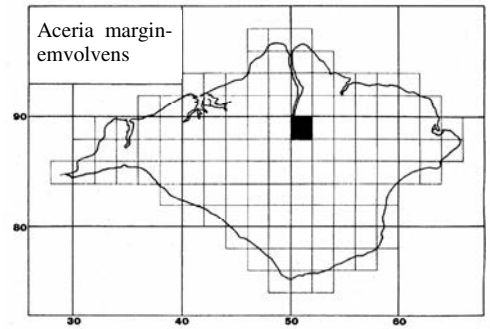
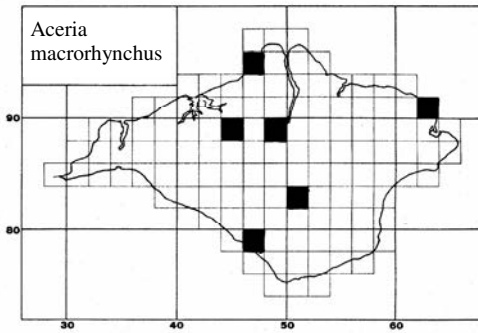
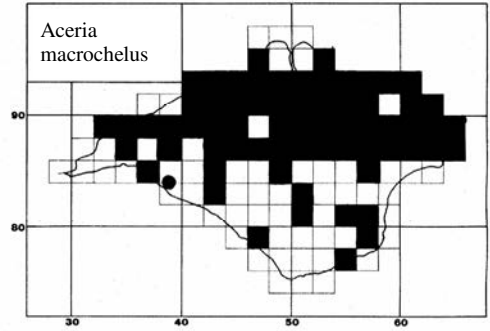
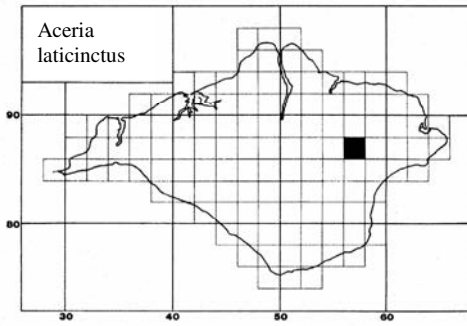
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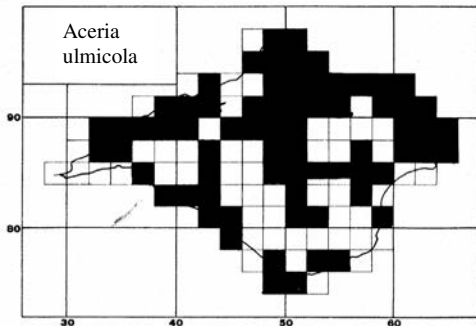
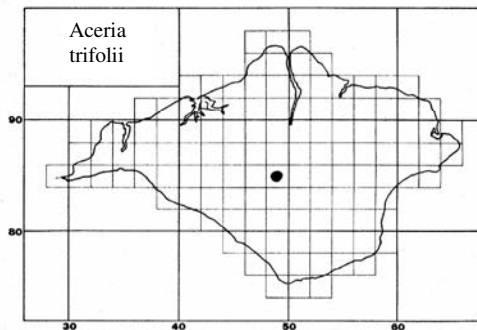
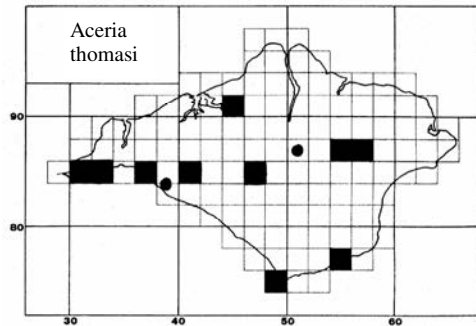
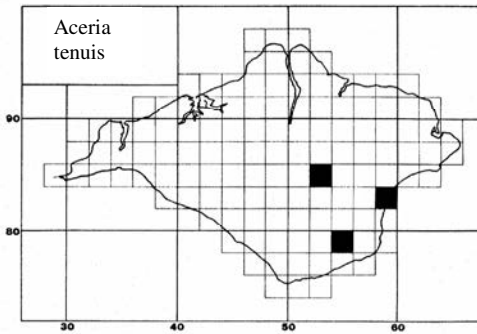
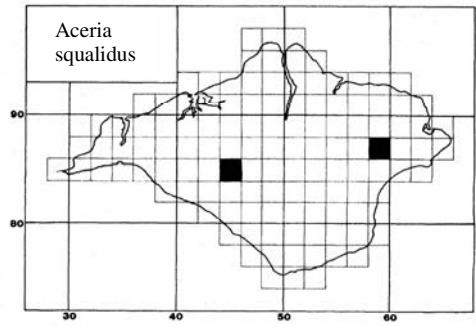
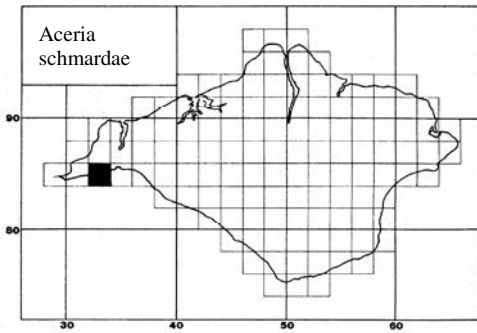
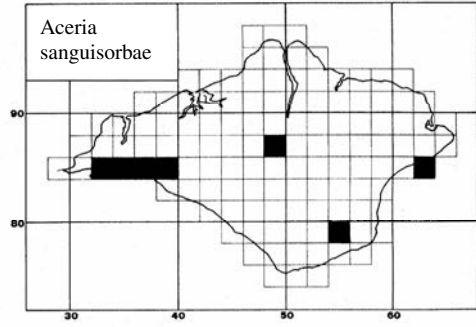
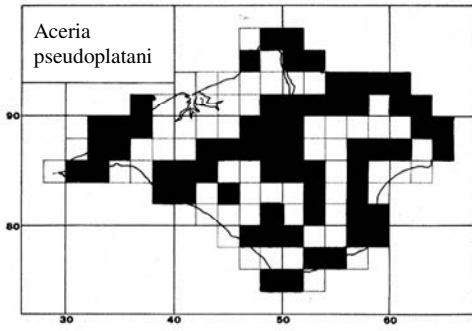
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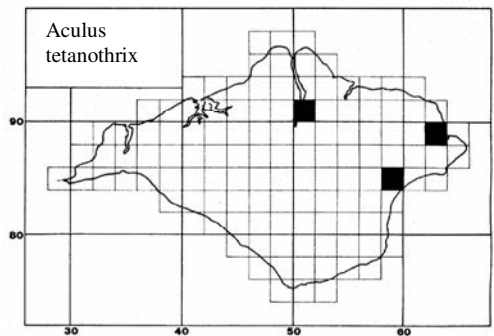
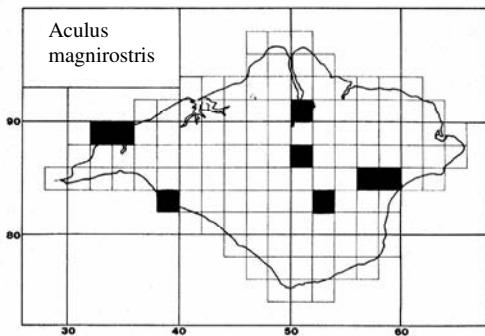
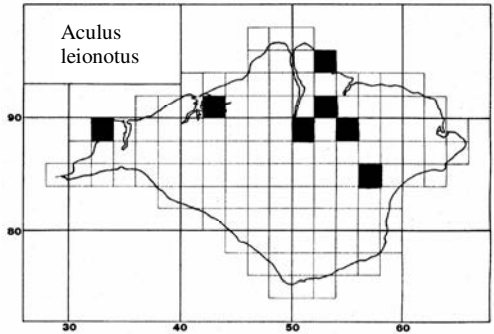
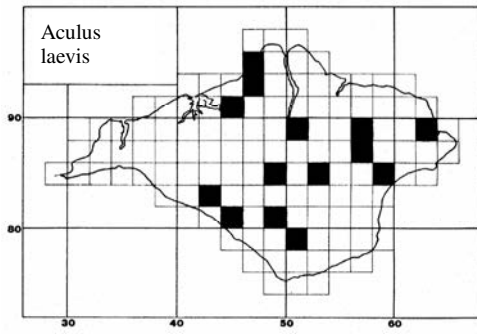
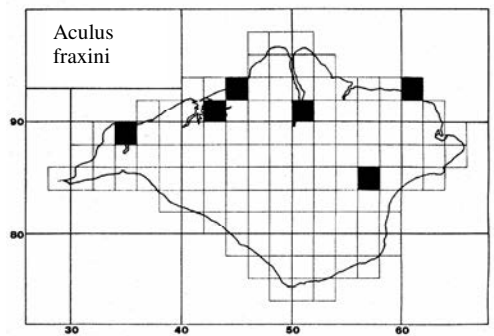
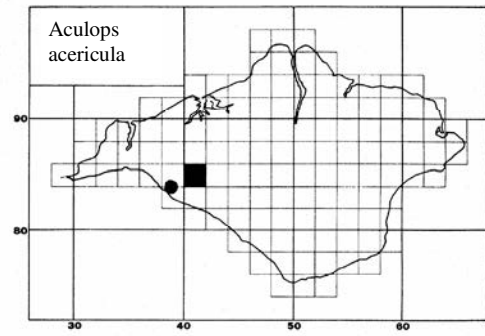
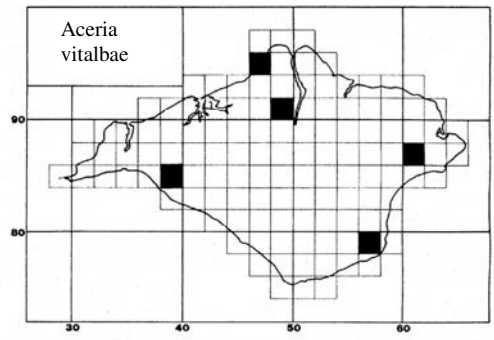
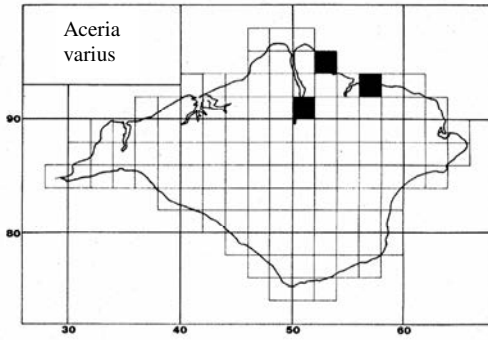
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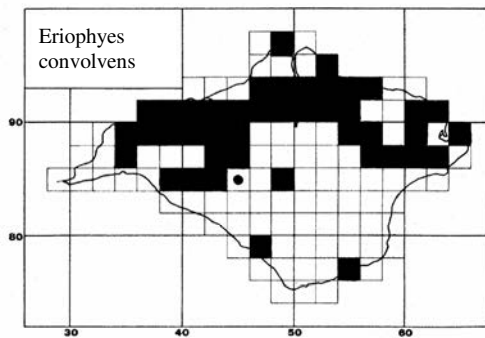
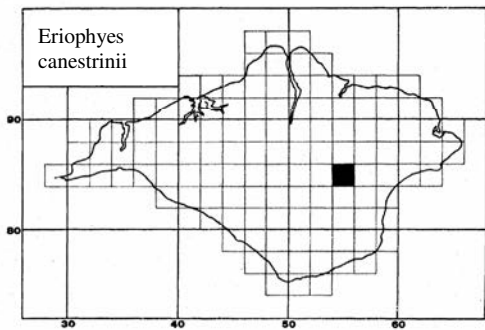
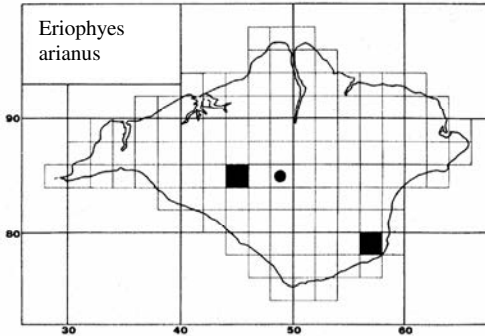
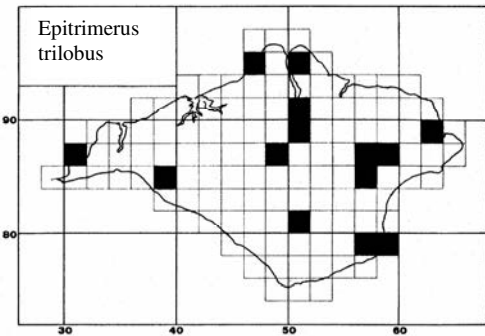
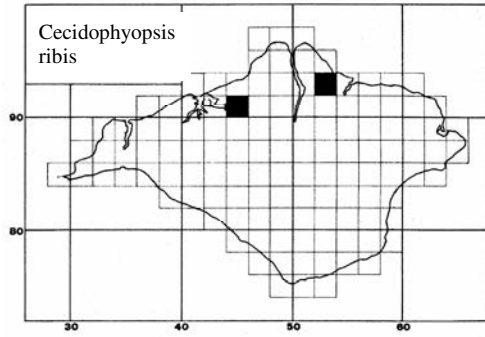
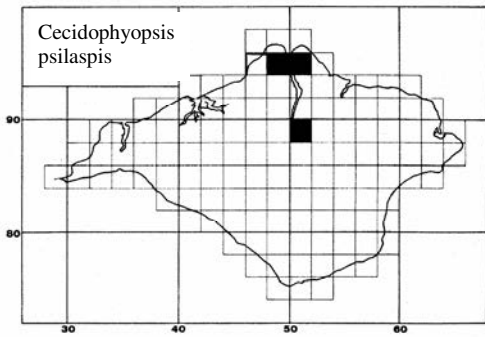
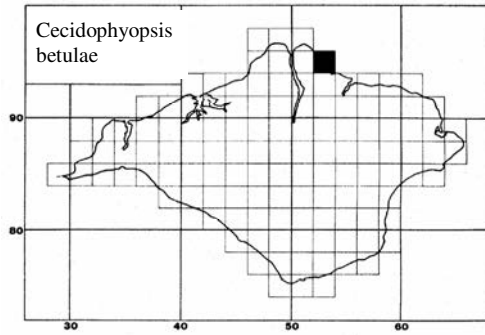
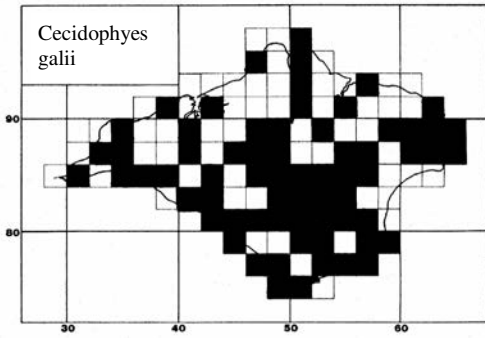
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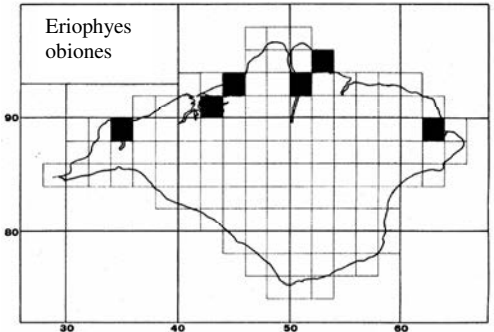
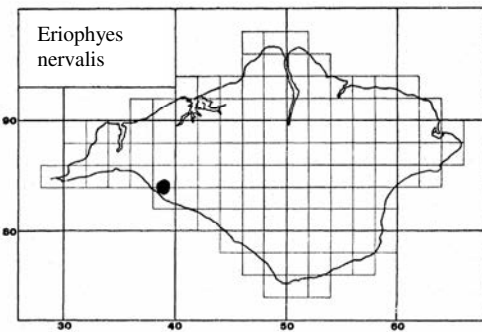
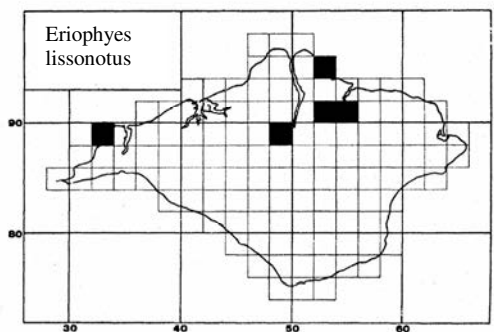
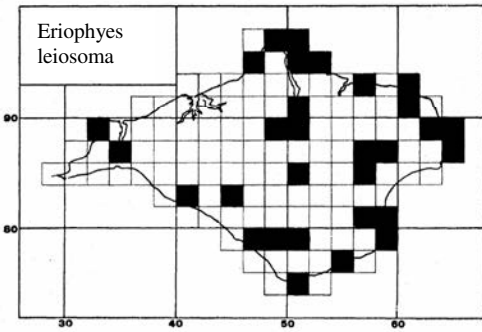
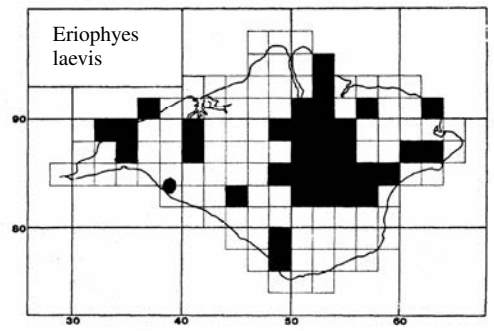
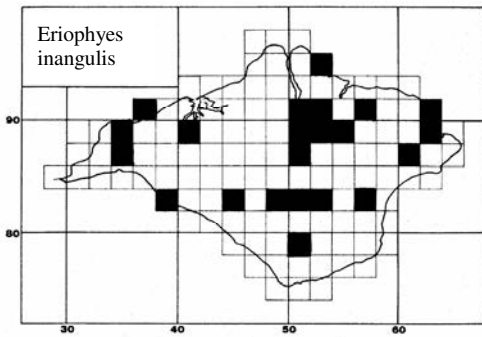
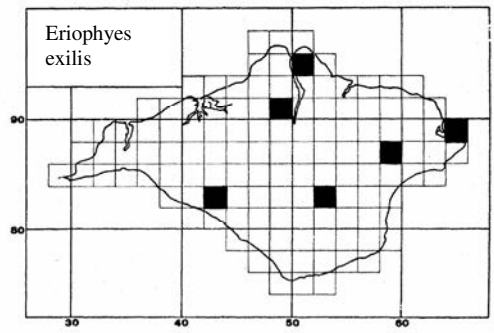
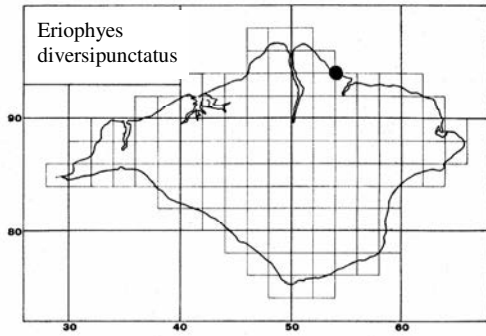
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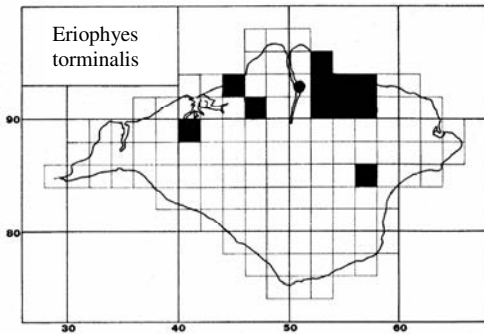
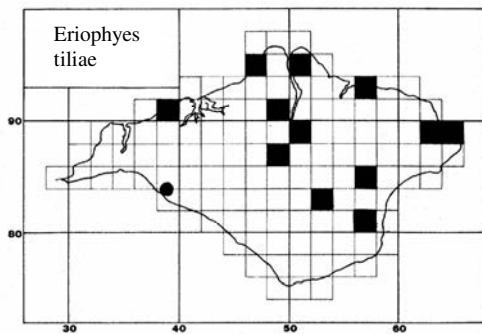
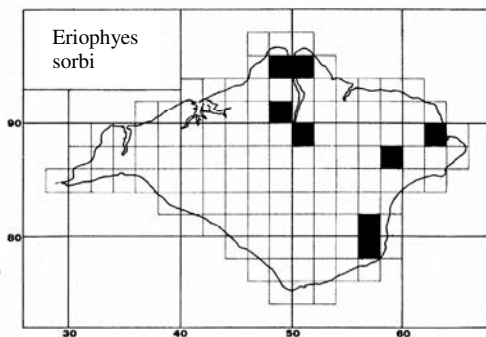
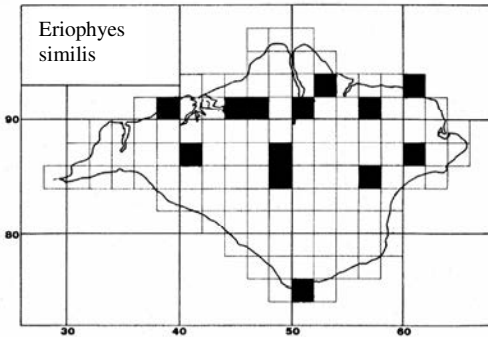
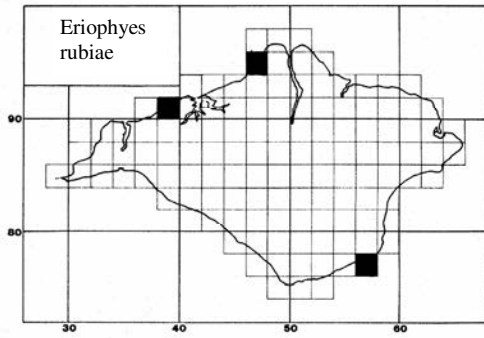
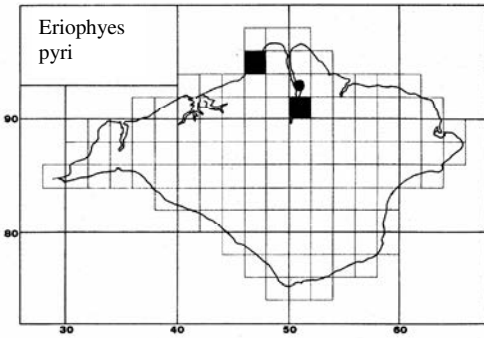
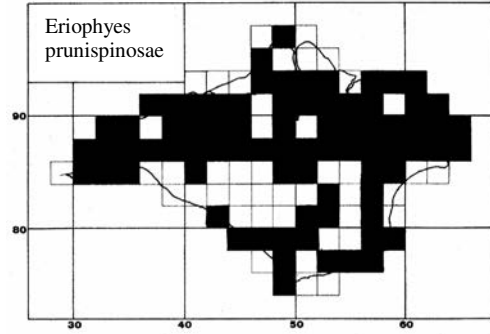
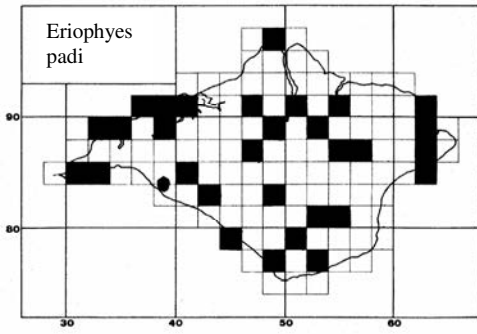
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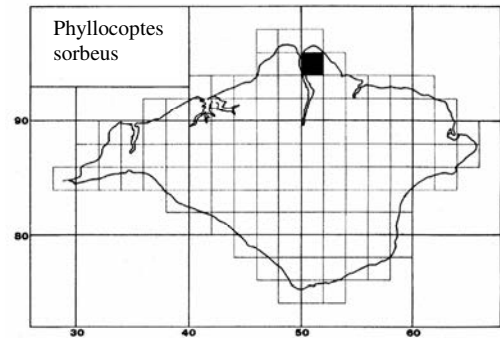
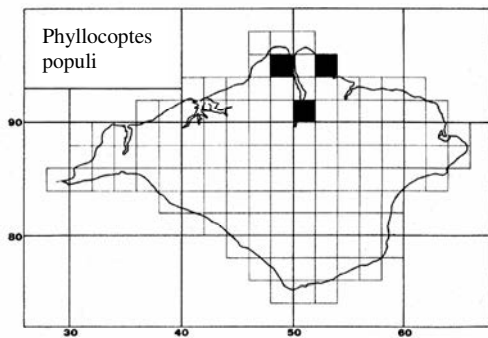
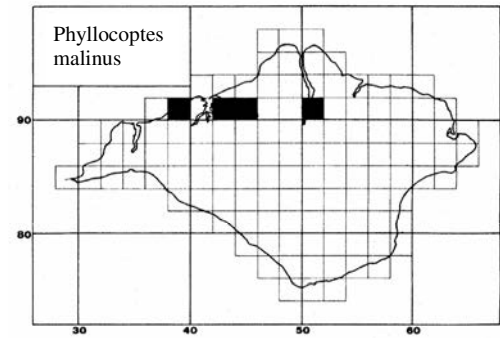
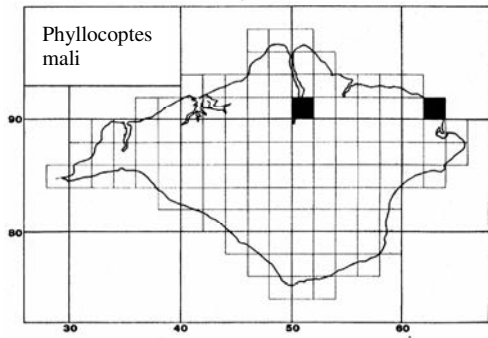
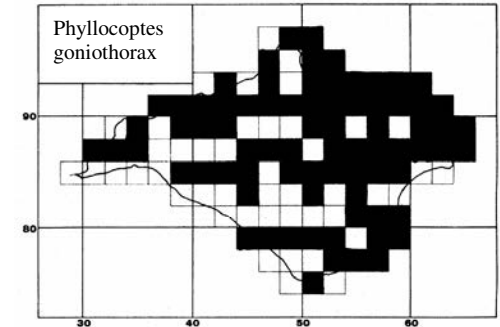
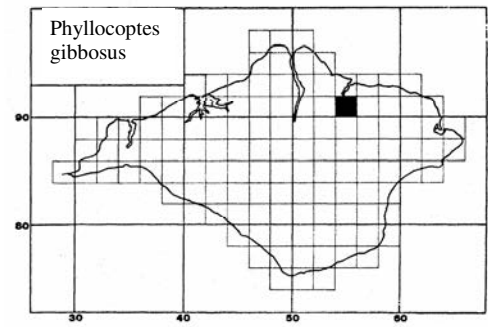
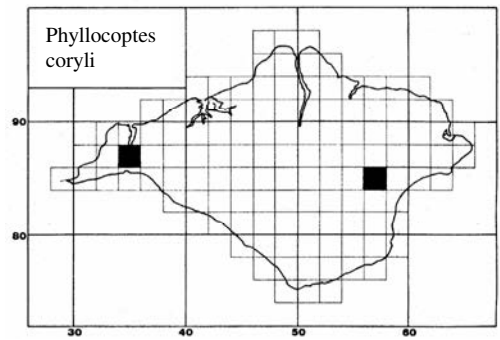
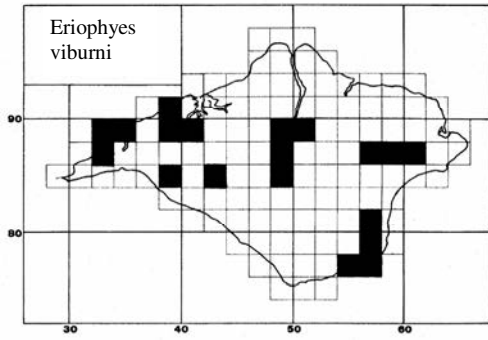
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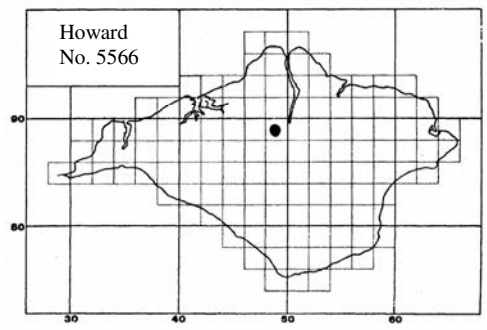
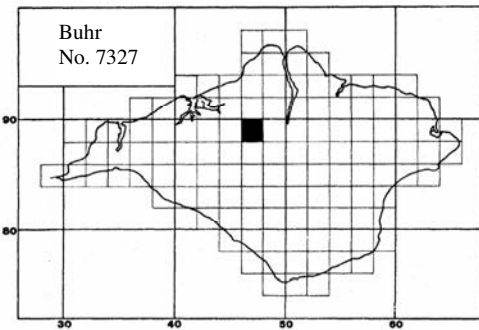
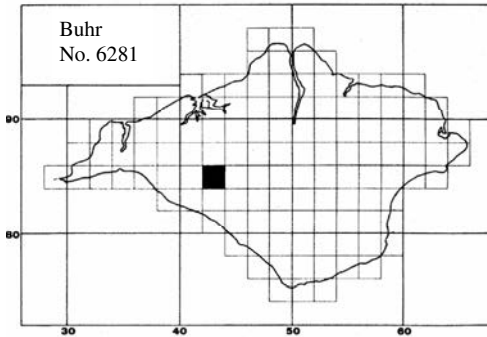
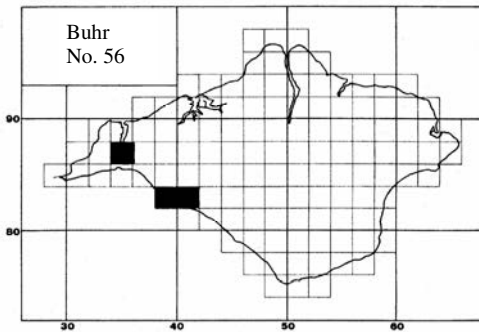
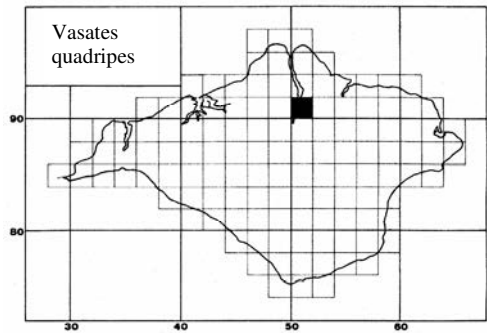
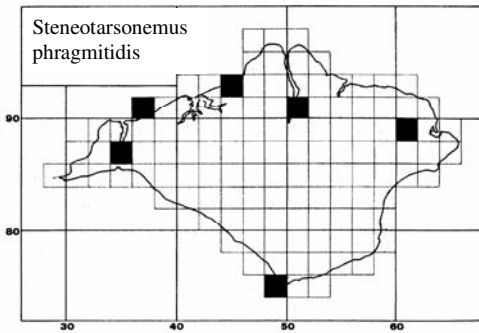
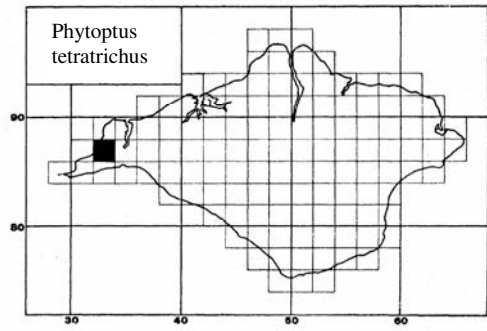
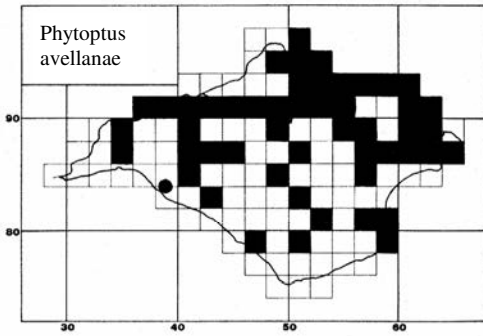
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MITE GALLS ON THE ISLE OF WIGHT



MITE GALLS ON THE ISLE OF WIGHT



NOTABLE MOTHS IN THE ISLE OF WIGHT DURING 2005

Sam Knill-Jones

Introduction

The winter of 2004-5 was the driest in southern England since 1962-63. At Freshwater, February was the driest month of the year with 12.5mm rainfall. January was also dry with 53.1 mm rainfall and was the warmest since 1990. A little snow fell every night from Feb. 22nd to Feb. 28th and there was also snow on March 2nd, 4th and 5th. May was a warm month and May 27th was the hottest May day for sixty years in London with a temperature of 36°C. It was a warm summer with monthly rainfall totals being below the average. The wettest month of the year was October 131.8mm. rainfall. November and December were much drier with sunshine totals well above average and the first frosts occurred on November 13th. At the time of writing the winter of 2005/06 has been exceptionally dry in southern England with the reservoirs at very low levels.

It was a nationally poor year for migrants although the Isle of Wight fared quite well with three species of macros new to the Island list.

Account of Notable Moths

The year started early when on January 19th, Colin Pope found an example of Bloxworth Snout (*Hypena obsitalis*)(Hb.). hibernating in a cave in St Lawrence. A second example was found by Peter Cramp at Ventnor on August 5th. There have been several records of this species in the Ventnor area and it may be established there where the larva feeds on Pellitory-of-the-wall. On April 2nd I recorded a Barred Toothstripe (*Trichopteryx polycommata*)(D.&S)) at light at Totland and a larva was beaten from Wild privet (*Ligustrum vulgare*)in early May on West High Down. This species is new to the Island and probably occurs in small numbers on West High Down where there is an abundance of the foodplant. It has a nationally scarce status.

There are two species of micromoths, which have been recorded in previous years which are new to the Island.

Pseudatemelia josephine (Toll.)

I recorded two specimens of the above species at Totland on May 24th and 2nd June 2005. However I had previously recorded it at Parkhurst when I recorded two examples on July 8th 1999. All the specimens were identified at the relevant years of the British Entomological and Natural History Society Annual Exhibitions.

Eucosma conterminana (Guenee)

At the 2005 Annual exhibition of the British Entomological and Natural History Society an example of the above species recorded at Totland on July 26th 2004 was identified. The larva feeds on Prickly Lettuce (*Lactuca serriola*) and was first recorded in Hampshire at Itchen Valley in 1976.

Two further macromoths, new to the Island, were recorded by James Halsey at Bonchurch in 2005.

Rest Harrow (*Aplasta ononaris*)(FueIsl.)

August 17th. This species is resident in south east England but this example was undoubtedly a migrant.

Clancy's Rustic (*Platyperigea kadenii*)

Was also recorded for the first time on the Isle of Wight at Bonchurch on September 26th. Further

NOTABLE MOTHS IN THE ISLE OF WIGHT DURING 2005

records followed from Bonchurch with singles on September 28th and two on both October 22nd and 26th. One was also recorded at Totland on October 16th.

Oak Rustic (*Dryobota labecula*).

Was recorded for the first time at Luccombe by Steve Pittis on October 21st and at Bonchurch where six were recorded at the end of October. There were three further records from Totland during the same month and eggs have been obtained. There were also records this year from mainland Britain at Swanage, Dorset and in Hampshire. It appears that it is now establishing itself along the south coast of Britain.

Flame Brocade (*Trigonophora flammea*)(Esy.) This rare migrant was recorded four times. Singles at Bonchurch on October 8th and at Luccombe on October 24 . Further records were made at Totland on October 25th and 27th.

Other migrants recorded include :

European Corn-borer (*Ostrinia nubilalis*)(Hubn.)

Was recorded in Totland on July 11.

Evergestis extimalis (Scop.)

Was recorded in Freshwater on July 25th .

Sitochroa palealis (D&S)

Was recorded at Totland on 18th August.

Udea fulvalis (Hubn.)

I noted two of this species on the light outside the Conservative Club at Freshwater where it has been established for over ten years although I have not recorded it at Totland.

Other moths of interest are listed below :

Leucoptera lotella (Stainton)

David Biggs found a tenated mine of this species at Osborne on August 13th which was confirmed by John Langmaid. This is not recorded in either of Goater's books, nor in Goater and Morris. Vol II of Moths and Butterflies of great Britain and Ireland does give a dot for Vice-county 10 (IW) so presumable Emmet himself has records of it. Interestingly he found the mine on a plant of *Lotus subiflorus*, which seems to be the first record for this plant for the Isle of Wight.

Scythropia crataegella (Linn.)

David Biggs found multiple mines that contained the larvae of this species. This species does not seem to have been recorded on the Island since the 1920's.

Archips crataegana (Hubn.)

The first recent record of this species was made at Totland on June 23rd.

Cydia amplana (Hubn.)

Three examples of this species were recorded at Totland in August and it is quite likely that these were home bred examples.

NOTABLE MOTHS IN THE ISLE OF WIGHT DURING 2005

Phlyctaenia perlucidalis (Hubn)

A record of one at Totland was made on June 26th which is the fourth Island record.

Playtes alpinella Hubn. An example of this local species was recorded at Totland on August 31st.
Homeocosma nebulella.

Three of this species were recorded at Totland on 6th, 11th and 18th August.

Clouded Magpie (*Abraxas sylvata* (Scop.)).

Two of this species were recorded in Parkhurst Forest on June 18th and one at Totland on July 31st.

Dark Tussock (*Dicallomera fascelina* (Linn.))

The fifth record for the Island in the last thirty years was made at Totland on July 18th. One was recorded at Freshwater in 2004 and it is possible that there may be a breeding colony on Heather (*Calluna vulgaris*) on Headon Hill.

Rosy Marbled (*Elaphria venustula* (Hubn.))

I recorded the fourth Island record of this pretty moth at Totland on June 23rd. It has now been recorded from Freshwater, Binstead and Cranmore in recent years and is probably established at a low density throughout the Island.

Green Silver Lines (*Pseudiops prasinana*)(Linn.) James Halsey recorded a second brood of this species at Bonchurch on August 15th.

Elephant Hawk (*Deilephila porcellus*)(Linn.) James Halsey recorded this species on August 16th, a very late date. 2005 was an average year with three macromoths new to the Island recorded in that year.

Acknowledgements

I should like to thank Dave Woodlridge for reading and commenting on the manuscript and to James Halsey for the photographs. My thanks also go to Dr David Biggs, Peter Cramp, Dr John Langmaid, Tim Norris, Madge Joiner (Weather), Rev. Steve Pittis and Colin Pope whose records, along with my own, form the basis of this paper.

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ODONATA RECORDS FOR 2005

J M Cheverton

Most damselfly species had a good year. The Beautiful Demoiselle *Calopteryx virgo*, Large Red Damselfly *Pyrhosoma nymphula*, Blue-tailed Damselfly *Ischnura elegans* and Azure Damselfly *Coenagrion puella* all showed large increases on the low numbers recorded in 2004 while the Banded Demoiselle *Calopteryx splendens* showed some improvement. The count of the Small Red-eyed Damselfly *Erythromma viridulum* was the largest yet recorded while the numbers recorded of the Red-eyed Damselfly *Erythromma najas*, a recent discovery, continued to increase and the localities spread. Dragonfly numbers were, in the main, greatly improved on those for 2004. The Southern Hawker *Aeshna cyanea* recovered well from the low number recorded then as did the Emperor *Anax imperator*. The Common Darter *Sympetrum striolatum* and Broad-bodied Chaser *Libellula depressa* showed some increase but very few Ruddy Darter *Sympetrum sanguineum* were seen. For the scarcer species there was a welcome increase in sightings of the Hairy Dragonfly *Brachytron pratense* and the Common Hawker *Aeshna juncea*. Three scarce migrants were recorded: one Yellow-winged Darter *Sympetrum flaveolum* and two Red-veined Darter *Sympetrum fonscolombii*.

Systematic List

Calopteryx virgo (Beautiful Demoiselle)

The total recorded this year was 135, the second highest number since the first were recorded in 1989. Most were seen at "Wild Tracts", Shalfleet (SZ4189), the first on 3rd May (VG) and the last on 15th August (VG). A few were recorded along the Caul Bourne between Shalfleet and Homestead Farm (SZ4188).

Calopteryx splendens (Banded Demoiselle)

The total recorded was 155, an increase on the number for last year but still lower than for most years in the last decade. The first, a female, was seen at Holliers Farm (SZ552831) on 8th June (DD), the latest first sighting since 1996. The last was seen at Godshill (SZ523831), near the River Yar, on 16th August (DD).

Lestes sponsa (Emerald Damselfly)

The total recorded was 50 with the first at Longlands disused farm reservoir (SZ560819) on 11th July (DD) and the last at Clamerkin National Trust pond (SZ439909) on 6th September (JMC). This sighting was the latest since recording commenced in 1978.

Platycnemis pennipes (White-legged Damselfly)

Not reported since 1992.

Pyrhosoma nymphula (Large Red Damselfly)

A slightly better year than last with 172 recorded compared with 205 in 2003, 388 in 2002 and 781 in 2001. The first, a male, was seen at "Wild Tracts", Shalfleet (SZ4189) on 20th April (VG) and the last at Luccombe Cliff pond (SZ584795) on 8th July (DD)..

Ischnura elegans (Blue-tailed Damselfly)

This was a much better year than the last with a total of 1076 recorded, the third highest since 1978. The first were seen at Medina Valley Centre (SZ5090) on 17th May (KM) and the last at Thorness Marsh (SZ459931) on 3rd September (DD).

ODONATA RECORDS FOR 2005

Enallagma cyathigerum (Common Blue Damselfly)

This species remains widespread and common with at least 4639 individuals seen this year. The first was recorded at Clamerkin National Trust pond (SZ439909) on 27th May (JMC) and the last at Atherfield Green Farm reservoir (SZ466797) on 25th September (DD), the latest date so far.

Coenagrion pulchellum (Variable Damselfly)

None reported since 1997.

Coenagrion puella (Azure Damselfly)

The total number recorded was 2030 marking a return to the range of figures noted for most of the years since 1994, after two years with very low numbers. The first was seen at Locks Farm (SZ444909) on 2nd May (BJA) and the last at a pond under Gatcliff (SZ535805) on 17th August (DD).

Erythromma viridulum (Small Red-eyed Damselfly)

After two relatively poor years the 1269 recorded this year was the highest number since the species arrived in 2000. The first was seen at a private pond at Little Princelett (SZ560829) on 11th July (DD) and the last at Merstone Fishing Lakes (SZ533838) on 30th August (DD).

Erythromma najas (Red-eyed Damselfly)

After the first sighting in 2001 this species appears to be spreading in small numbers. However, it is possible that it has been overlooked in the past. Twelve were recorded this year. The first, four males, were seen at Dickson's Copse pond (SZ500916) on 20th July (KM) and the last at Langbridge Farm reservoir (SZ556861) on 16th August (DD).

Brachytron pratense (Hairy Dragonfly)

The total number recorded was 17, the highest since the first was noted at Brading Marsh in 2001. As the more recent sightings at new localities do not appear to have radiated from Brading Marsh it is possible that this is another species that may have been overlooked in the past. This year the first was seen at Clamerkin National Trust pond (SZ439909) on 27th May (JMC) and the last at the same place on 9th June (BJA).

Aeshna juncea (Common Hawker)

Two pairs were seen ovipositing at Carisbrooke pond (SZ4887) on 24th September (KM). The last record of this locally uncommon species was in 2003

Aeshna grandis (Brown Hawker)

There were two records this year: one at Pondacre Farm (SZ456892) on 21st June (BJA) and a female at Afton Marsh (SZ3486) on 29th August (JMC).

Aeshna cyanea (Southern Hawker)

After a poor showing last year this species has recovered well with 158 recorded this year, the second highest total since recording commenced in 1978. The first was seen at Ningwood Common (SZ392894) on 11th June (CD) and the last at Gurnard (SZ476954) on 27th October (DTB).

Aeshna mixta (Migrant Hawker)

A good year with 229 individuals reported, the second highest number since the first was recorded in 1979. The first was seen at America Wood (SZ566823) on 30th July (DD) and the last at Locks Copse (SZ4490) on 27th October (BJA).

ODONATA RECORDS FOR 2005

Anax imperator (Emperor Dragonfly)

This was a good year with 210 recorded. The first was seen at Clamerkin National Trust pond (SZ439909) on 27th May (JMC) and the last at "Wild Tracts", Shalfleet (SZ4189) on 10th October (VG).

Cordulegaster boltonii (Golden-ringed Dragonfly)

An average year with 28 recorded. The first was seen at Blackgang lower cliff mud-slide (SZ484769) on 21st June (DD) and the last ovipositing in a garden at Westhill, Shanklin (SZ576810) on 22nd September (JMC).

Libellula depressa (Broad-bodied Chaser)

The number recorded was 76, higher than for last year, but still below the average of 101 for the last ten years. The first was seen at Parkhurst Forest Field Study Centre (SZ470913) on 12th May (DD) and the last at Yaverland Marsh (SZ608852) on 11th August (DD).

Libellula quadrimaculata (Four-spotted Chaser)

None reported this year..

Orthetrum coerulescens (Keeled Skimmer)

As a result of an increase in the number of visits to the cliffs in the Chale Bay area, the 109 individuals recorded this year was the second highest number since the colony was rediscovered by BJA in 1983. The first were seen there at SZ470913 on 19th June (KM) and the last on a ledge east of Walpen Chine (SZ4777) on 19th August (DD, KM).

Orthetrum cancellatum (Black-tailed Skimmer)

Another good year with 452 individuals reported, the second highest number since 1978. The first, a female, was seen at Clamerkin National Trust pond (SZ439909) on 27th May (JMC) and the last at Atherfield Green Farm reservoir (SZ466797) on 2nd September (DD).

Sympetrum flaveolum (Yellow-winged Darter)

A male of this scarce migrant species was seen at a cliff ledge near Luccombe Steps (SZ583793) on 31st August (DD). This was the first record since 1995.

Sympetrum fonscolombii (Red-veined Darter)

There were two records of this scarce migrant. One was seen near Luccombe steps (SZ583793) on 7th August (DD) and the other at Meadow Farm reservoir, Bathingbourne (SZ544831) on 8th August (DD).

Sympetrum striolatum (Common Darter)

This was a much better year for this dragonfly with 562 individuals reported. The first was seen at the pond at the MoD Range, Newtown, (SZ441909) on 27th June (BJA) and the last at the same locality on 20th November (JWW).

Sympetrum sanguineum (Ruddy Darter)

A slightly better year with 63 individuals recorded. The first was at Thorness Farm pond (SZ437810) on 6th July (DD) and the last at "Wild Tracts", Shalfleet (SZ4189) on 18th September (VG).

ODONATA RECORDS FOR 2005

Observers

I thank the following observers who have contributed records, only a small number of which are shown above.

Mr B J Angell (BJA)

Dr D T Biggs (DTB)

Mr A J L Butler (AJLB)

Mrs E Butler (EB)

Mr M Cahill (MC)

Mr D Dana (DD)

Mrs C Dudley (CD)

Ms V Gwynn (VG)

Mr S Knill-Jones (S K-J)

Mr D Longe (DL)

Mr K Marston (KM)

Mr B Ransom (BR)

Mr D Tucker (DT)

Mr J W Willmott (JWW).

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METEOROLOGICAL REPORT FOR SHANKLIN, ISLE OF WIGHT FOR THE YEAR 2005

Clive Cooper

Abstract

Shanklin Weather Station was established approximately 56 years ago. It is classed as a Health Resort Station and is owned and maintained by the Isle of Wight Council. The station is situated at The Mead, a park area just past Shanklin 'Old Village' towards the outskirts of the town and is 50 feet above sea level. The station is a simple one consisting of a 5" standard rain gauge and a Stevenson's Screen equipped with four thermometers. Readings and observations are taken twice daily at 09.00GMT and 17.00GMT. The Campbell Stokes recorder is located on the roof of Shanklin Theatre which, at 180 feet above sea level, is the highest point in the town. Readings here are taken at 17.00GMT. I have access to some old Weather Diaries and all averages refer to the period 1983 - 2005.

Temperatures

The yearly mean temperature was 11.21°C and was 0.45°C above the long-term average. 2005 was cooler than 2002, 2003 and 2004, making it the 7th warmest year since 1983. The months with the highest positive anomalies were October with 2.4°C, January with 1.6°C, June with 1.2°C, September 1.0°C and both April and July each with 0.8°C. There were four months with a negative anomaly; August with 0.1°C, February with 0.4°C, November with 0.9°C and December with 1.0°C. Overall the mean minimum temperature was 0.5°C above the yearly average and the mean maximum was 0.4°C above the yearly average.

The highest temperature of the year was 26.2°C and occurred on 10th July. There was a total of 44 days (14 days more than the long-term average) when the temperature reached or exceeded 21.1°C (70°F); one in May, 11 in June, 14 in July, 14 in August and four in September. The lowest maximum daytime temperature of 1.6°C was recorded on 28th December. The highest overnight temperature was 17.2°C and was recorded on the 1st September. The lowest overnight minimum temperature was -5.0°C on 28th February. There was a total of 26 air frosts (defined as a temperature below 0.0°C); seven in February, five in March one in April, six in November and seven in December. The latest spring frost was recorded on 9 April. The first frost of the autumn was recorded on 18 November. This was the first November to register an air frost since 1999, and January 2005 was the first January since my records began in 1983 to be frost free.

Rainfall

The rainfall for the year 2005 totalled 723.1mm representing 83% of the long-term average. 2005 was the driest year since 1991. There were 155 days with measurable rainfall. The three months with above average rainfall were August with 57.1mm (113% LTA), October with 154.1mm (129% LTA), and July with 72.1mm. (167% LTA). The nine months with below average rainfall were February with 20.5mm (32% LTA), September with 29.1mm (40% LTA), January with 53.8mm (54% LTA), March with 45.5mm (72% LTA), November with 80.7mm (75% LTA), December with 79.4mm (77% LTA), June with 35.0mm (78% LTA), April with 53.8mm (88% LTA), and May with 42.0mm (93% LTA).

An amount of rainfall reaching or exceeding 25.4mm(1 inch) in a 24hr period ending at 09.00GMT, occurred on two days; 24 July with 26.4mm and 23 October with 44.6mm.

Sunshine

The total sunshine hours for 2005 was 2048.4 which represents 109% of the long-term average. The sunshine for the three summer months, June, July and August totalled 807.4 hours.

METEOROLOGICAL REPORT FOR THE YEAR 2005

The sunniest month of the year was August with 285.2 hours, representing 119% of its long-term average. During 2005 there were nine months with above average sunshine. The months with the highest sunshine anomalies were December with 155% LTA (90.5 hours), November with 146% LTA (116.7 hours), August with 119% LTA (285.2 hours), and February with 115% LTA (101.2 hours). The three months not to attain their monthly average were October with 87% LTA (107.4 hours), April with 92% LTA (175.1 hours) and March with 95% LTA (118.9 hours). The sunniest day of the year was 22 June when 15.5 hours of sunshine was recorded.

Between 1 May and 30 September there were 66 days on which over 10 hours of sunshine was recorded. This is seven days more than the long-term average.

Miscellaneous Phenomena

Thunder

Thunder was heard on 9 days compared to the long-term average of 10; one in May, three in June, two in August, one in September and two in October.

Hail

Hail was recorded on 9 days; two in February, three in March, and one in each of April, May, October and December.

Sleet / Snow

Sleet and/or snow fell on 11 days: six days in February, four in March and one in December. The falls were mainly light in Shanklin although snow was observed lying on the downs on 5 March and 26 November (Only rain was recorded at Shanklin on the November 26.)

Gales

Gales occurred on 17 days during the year, six in January, two in February, one in March, one in August, two in October, three in November and two in December.

MONTHLY WEATHER SUMMARY – 2005

| MONTH | AVE. TEMP. °C | MEAN MAX. °C | MEAN MIN. °C | RAINFALL mm | SUNSHINE hours |
|---------------|------------------|-----------------|-----------------|----------------|-------------------|
| JAN | 7.3 | 9.4 | 5.1 | 53.8 | 75.8 |
| FEB | 4.9 | 7.3 | 2.6 | 20.5 | 101.2 |
| MAR | 7.0 | 10.0 | 4.0 | 45.5 | 118.9 |
| APR | 9.3 | 12.3 | 6.2 | 53.8 | 175.1 |
| MAY | 11.9 | 15.3 | 8.5 | 42.0 | 267.5 |
| JUN | 15.7 | 19.1 | 12.2 | 35.0 | 249.2 |
| JLY | 17.5 | 20.9 | 14.2 | 72.1 | 273.0 |
| AUG | 17.0 | 20.9 | 13.1 | 57.1 | 285.2 |
| SEP | 15.9 | 19.3 | 12.6 | 29.1 | 187.9 |
| OCT | 14.5 | 16.8 | 12.2 | 154.1 | 107.4 |
| NOV | 7.8 | 11.0 | 4.6 | 80.7 | 116.7 |
| DEC | 5.7 | 8.6 | 2.7 | 79.4 | 90.5 |
| YEARLY | 11.2 | 14.2 | 8.2 | 723.1 | 2048.4 |
| FIGURE | | | | | |

Author : Clive Cooper, 78 Whitecross Avenue, Shanklin, Isle of Wight PO37 7ET

OBITUARIES

Dorothy Adeline Frazer (1919-2003)

Dorothy was born on 1st October 1919, the youngest of five children of Kingsley and Adeline Letitia Newman. The family came from Barnsley, in Yorkshire, but soon after Dorothy was born they moved to the village of Badminton, in Gloucestershire.

Later, while Dorothy was still a child, they moved to London.

From an early age she was interested in wildlife (especially botany) and in a wide range of arts and crafts. When she left school she trained at the Royal School of Needlework, becoming very accomplished. During her lunch-hours she used to look in the windows of Liberty's, memorise the patterns of the clothes on display, and go home to make excellent replicas from whatever scraps of cloth she could obtain in the era of wartime rationing; her family often wondered how she afford such obviously expensive clothes! In due course her skill was recognised, and she was appointed Wardrobe Mistress of the Royal Shakespeare Company in Stratford, and also ran training courses for teachers.

In the early 1940s Dorothy was married briefly; her young husband was already sickly, and died within a few months. Then after the War she met Oliver Frazer again ("again" because they were actually remote cousins, and as children had met several times at family events). As Oliver was a few years older than Dorothy, she remembered him, and was always annoyed that he had not remembered her. But now that they were both adult, the few years' difference was not important, and they married.

They moved to the Isle of Wight, mainly because Oliver's parents had retired from London to Freshwater in 1939. For a short time, while they were looking for somewhere to settle, Oliver and Dorothy were able to live in a large house named Pitt Place, near Mottistone; the owner was still serving abroad in the Forces, and did not want the house to be left unoccupied. They used Pitt Place as a base to search for somewhere more permanent, and were soon delighted to find Mottistone Mill. They purchased it, and moved in in 1951. The Mill, and their life there, have been described by Colin Pope in *The Frazers at Mottistone Mill* (published by the IWNHAS in 2005).

On coming to the Island, Dorothy dropped her professional needlework, but still occasionally demonstrated her versatility in it, as the following two very different examples show. She repaired the altar cloths at Mottistone Church (where she was a Churchwarden for twenty years and much involved in the community). She also made costumes for Oliver to act as dame in school pantomimes; many will recall his performances at Priory Girls' School, Newport, or Cowes High School.

Dorothy joined the Society in 1952; she was soon elected to Council, and became involved in the Society's activities – at first in support of whatever Oliver was doing, but increasingly developing wider interests. Her inherent reserve caused many people to be unaware of the important contributions she was making behind the scenes.

In 1970 she became the first Librarian of the Society, taking control of a collection of books and papers (mostly concerned with botany or horticulture) bequeathed by E.H. White, a former President. This was the nucleus of our present much larger Library. Dorothy arranged for the items to be housed in a cupboard in the County Library at Newport. The cupboard was locked, but members who identified themselves to the Library staff were allowed access. She introduced a cataloguing system, and supervised the transfer of the Library to our first headquarters in Carisbrooke Road, Newport, and then to our second headquarters in the Rylstone Garden Chalet, Shanklin.

She was deeply involved in the Local Look Exhibition at Brook for many years. She and

OBITUARIES

Oliver devoted countless hours to it, before, during and after the opening times. Dorothy particularly offered her artistic talents to all the exhibitors, preparing labels and explanatory texts.

In 1972 she was elected President of the Society. During her term of office she was involved in all aspects of the Society's activities, but was most keenly interested in conservation. It was appropriate that during the same period she was also the Chairman of the Isle of Wight Area Board of the Hampshire and Isle of Wight Naturalists' Trust. When she completed her years as President, in 1975, she became the Conservation Officer of the Society. This led her also to represent the Society on other bodies, such as the Council for the Protection of Rural England and the Island Conservation Areas Advisory Committee.

When Oliver died in 1994, Dorothy continued to live at The Mill, which was rapidly deteriorating. Her life there must have been very difficult, but she was strongly independent and politely declined all offers of assistance. Then one bitterly cold winter evening, with no heating in the house, she did at last give in, and phoned for help. We took her to the doctor, who diagnosed hypothermia, and was able to find her immediate accommodation in Brighstone Grange Residential Care Home; ironically, this was the same building, known as Pitt Place, where she had lived briefly about fifty years earlier. She lived on there for several years, but did not consider it a permanent arrangement; she wanted to stay there in the winters, and return to live at The Mill in the summers. But that was not to be; apart from a few day visits, she never went to The Mill again. She spent her days in The Grange reading, mainly about art.

Dorothy died in her sleep in the early hours of 17th December 2003. On the previous evening she had participated enthusiastically in the Brighstone Grange Christmas Party.

She left the Society a very generous legacy. As it was undoubtedly also in accordance with Oliver's wishes, the Society has gratefully accepted it as coming from them both, and has named it The Frazer Bequest.

John Stafford

OBITUARIES

Kenneth Vincent Thompson (1915-2004)

Kenneth Thompson was born in 1915, in Sandown. He was educated at Ryde School, and then articulated with accountants George H. Brown and Sons in Shanklin. In the late 1930s he moved to join another firm of accountants in Singapore.

With the advent of war, he joined the Singapore Volunteer Force, and was taken prisoner when the city fell. He remained a prisoner of the Japanese for three-and-a-half years, during which he was compelled to work on the notorious Burma Railway.

After the war he returned to Singapore, and subsequently re-opened offices in Jesselton, North Borneo, and later in Hong Kong. He became a director of accountants Turquand Youngs & Co, and a Fellow of the Institute of Chartered Accountants.

While living in Jesselton he travelled (often by primitive means) around the country, working on the financial accounts of plantations, and also taking opportunities to observe the birds. When B.E. Smythies' *The Birds of Borneo* (1960) was revised for a third edition by the Earl of Cranbrook in 1980, Kenneth contributed new information on over 50 species. Kenneth's copy of the book contains a personal inscription by Lord Cranbrook, thanking him for his help.

Kenneth returned to live in the family home, Eagle's Nest, Bonchurch, in about 1965, joining the Isle of Wight Natural History and Archaeological Society that year, and remaining a member until his death 39 years later. In 1966 his work in Borneo was recognised by his election as a Member of the British Ornithologists' Union.

For a long time after 1965 he contributed annual notes for the Bird Report (often in a barely legible hand, but worth the effort of deciphering), until his health declined in recent years. He served on the Council of the IWNHAS from 1982 to 1985.

In 1976, at Whitwell Church, Kenneth was married to Phyllis Heaton, whom he had known earlier in North Borneo. They settled at Primrose Bank, Brighstone.

Kenneth Thompson died on 12th March 2004, aged 89. His wife Phyllis survives him.

John Stafford

**PROCEEDINGS
OF THE
ISLE OF WIGHT
NATURAL HISTORY AND
ARCHAEOLOGICAL SOCIETY**

VOLUME 22

2007

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FLOWERING PLANTS AND FERNS – 2006

Colin R. Pope

New and interesting records of Island plants continue to be made, adding to an already well documented flora. This year particularly exciting records included the discovery of a population of Dwarf Sedge (*Carex humilis*) which must have been a previously overlooked native; the first records for many years of White Wall-rocket (*Diplotaxis eruroides*) and Spear-leaved Willowherb (*Epilodium lanceolatum*); and several good fern and fern allies records emanating from a field meeting of the British Pteridological Society in June. It was also pleasing to receive a number of records of hybrids. The Botanical Society of the British Isles are collecting hybrid records for a forthcoming new flora. Thanks are due to everyone who sent in records. All confirmed records are entered into an 'Aditsite' Access database, but not all of them find their way onto these pages. The abbreviations used at the start of the accounts are:

N. Native; C. Casual Alien; E Established Alien; P Alien Planted.

Hybrid Horsetail (*Equisetum x litorale*) (*E. arvense* x *fluviatile*)

N. A large population growing with both parents in valley marshland at the northern end of America Wood, Shanklin, 5682 PA, seen on field meeting of the British Pteridological Society in June. This is the first modern record; there is a single earlier Island record (1952) although it may well be overlooked.

Adder's-tongue (*Ophioglossum vulgatum*)

N. Recorded in some quantity from an unimproved meadow to the west of Ryde House, Binstead 5892 CP. This is a previously unrecorded site.

Hybrid Polypody (*Polypodium x mantoniae*) (*P. interjectum* x *vulgare*)

N. A few plants in Beacon Alley, near Godshill 5181 and damp valley in America Wood 5682. Seen on a field meeting of the British Pteridological Society in June. Conf Alison Paul. The first Island record.

Sea Spleenwort (*Asplenium marinum*)

N. Surviving on its single known boulder at Rocken End, St Catherine's Point 4975. The rock is now completely shrouded by elm re-growth and brambles. It was re-found by the British Pteridological Society in June.

Narrow Buckler-fern (*Dryopteris carthusiana*)

N. Re-found by the British Pteridological Society in June, in two locations in wet willow woodland: near Sandown waterworks 5885; and Alverstone Marsh 5785 GA. Only single specimens were found in each location.

Purple Clematis (*Clematis viticella*)

E. A large flowering plant scrambling over scrub on the landward side of Hamstead Duver 4191 HH. Clearly well established here, some distance from any garden. The first Island record from the wild.

Goldilocks Buttercup (*Ranunculus auricomus*)

N. A single plant found in the south-eastern arm of Chalkclose Copse, near Marks Corner 4692, mo. Not previously recorded from this ancient woodland.

Common Cudweed (*Filago vulgaris*)

FLOWERING PLANTS AND FERNS – 2006

Atlas Poppy (*Papaver atlanticum*)

E. Well established on a garden wall at Hunnyhill, Newport 4989 SB.

Fig-leaved Goosefoot (*Chenopodium ficifolium*)

N. A single plant in a garden in Culver Road, Shanklin 5881 VB.

Upright Goosefoot (*Chenopodium urbicum*)

N. Two plants growing on waste ground near Limerstone 4482 PS/DB.

Small-leaved Lime (*Tilia cordata*)

N. Several old coppice stools in a restricted area of Tapnell Furze, Wilmingham 3687 HM. Tapnell Furze is largely plantation woodland but it contains two areas of ancient woodland. The lime stools are located within a clearly defined loop of part of the ancient woodland. There are also a few large oaks and field maples on and within the old woodbanks.

Sweet-William Catchfly (*Silene armeria*)

C. This showy plant was found as a casual pavement weed in Chapel Street, Newport 4988 BS. First Island record.

Sea Heath (*Frankenia laevis*)

N? Two plants growing in cracks in concrete forming the old mill wall at Dodnor 5091 SR. They are believed to have been growing here for a number of years.

Black Poplar (*Populus nigra* subsp. *betulifolia*)

N? A splendid, very old and gnarled pollard, growing alongside of Chilton Farm, near Brighstone 4182 TT. Apparently, the tree has changed very little in appearance over tens of years.

Marsh Yellow-cress (*Rorippa palustris*)

C. Found growing spontaneously in a flowerpot in a garden in Wilberforce Road, Brighstone 4282 MB.

New-Zealand Bitter-cress (*Cardamine corymbosa*)

E. Well established as a weed within the walled garden at Osborne House 5194 PS.

Pink Shepherd's-purse (*Capsella rubella*)

E. Still surviving in Newport. Recorded from Hunnycross Way, and several strong plants on a grassy verge between St Cross and Towngate Bridge, both 5089 SB.

White Wall-rocket (*Diplotaxis eruroides*)

C. A few plants were found on sandy waste ground by the revetment at the foot of Lake cliffs 5983 VB (Conf. EJC). This is the first modern record for this species.

Perennial Wall-rocket (*Diplotaxis tenuifolia*)

E. One large plant recorded growing on the roundabout at Hillis Corner, Northwood 4793 PS.

Brookweed (*Samolus valerandi*)

N. A plant was found on a damp path by the coast on Osborne estate 5295 DB. It has not been recorded from this part of the coastline for many years.

FLOWERING PLANTS AND FERNS – 2006

Wall Pennywort (*Umbilicus rupestris*)

N. One flowering plant was seen on a wall near the foot of Shanklin Chine 4479 MB.

Chinese Bramble (*Rubus tricolour*)

E. Well established by Bow Bridge, Freshwater 3487 GT (conf. Eric Clement) First established record.

Wild Pear (*Pyrus pyraeaster* subsp. *achras*)

P. A single, giant tree was located in scrub to the west of Old House, Bembridge School, and close to the coastal footpath 6486 TS. The circumference of the bole was measured as 12' at 18". The tree bore a heavy crop of well-rounded fruits. The tree is likely to pre-date Bembridge School. Old House was built as a hotel in 1883. This tree is likely to have been planted in the orchard alongside. Further evidence for this, is the occurrence of two old trees of cherry plum (*Prunus cerasifera*) close by.

Hawthorn (*Crataegus monogyna*)

N. A striking, yellow-fruited tree was found in a hedge line just east of Rew Lane, Wroxall 5478 DW. Hawthorns bore heavy crops in the autumn of 2006 making this sport particularly noticeable.

Hybrid Rose (*Rosa canina* x *micrantha*) (*R. x toddiae*) (female x male)

N. Chale Green 4779 PS (Conf. Roger Maskew) The first Island record of this uncommon hybrid.

Hybrid Rose (*Rosa canina* x *obtusifolia*) (*R. x dumetorum*) (female x male)

N. Southdown, Chale 4778; Kingston 4881 PS

Hybrid Rose (*Rosa canina* x *tomentosa*) (*R. x scabriuscula*) (female x male)

N. Single bush at top of Lake cliffs 5983 PS

Sherard's Downy-rose (*Rosa sherardii*)

N? Kingston 4881; several bushes in a hedge at Lynn Common, Havenstreet 5389, both PS.

Sweet-briar (*Rosa rubiginosa* sens.str.)

N. Three bushes on the south side of Mottistone Down 4184 PS. This is the least frequent of our sweet briars.

Whitebeam (*Sorbus aria*)

N. Several trees towards the lower parts of Rew Copse 5477 CP. This is a previously unrecorded site for this plant.

Wild Service-tree (*Sorbus torminalis*)

N. A single tree recorded from the south-eastern arm of Chalkclose Copse, near Marks Corner 4692 mo.

Spear-leaved Willowherb (*Epilobium lanceolatum*)

N. A long-established garden weed population was reported from Culver Road, Shanklin 5881 VB. This is the first modern record for this infrequent species.

Broad-leaved Spurge (*Euphorbia platyphyllos*)

N. Two previously unrecorded arable field sites were at Sandy Lane, Blackwater 5086 SB and by a footpath at Skinner's Farm, Northwood 4792 DB.

FLOWERING PLANTS AND FERNS – 2006

Upright Yellow-sorrel (*Oxalis stricta*)

E. Recorded from a Brighstone garden 4282 PS. A new Island site.

Bur Chervil (*Anthriscus caucalis*)

N. A large clump found in dunes at Bembridge Point 6488 mo. This is a previously unrecorded site.

Knotted Hedge-parsley (*Torilis nodosa*)

N. A large plant recorded growing on a verge on the Industrial Estate, Daish Way, Newport 4990 SB.

Kangaroo-apple (*Solanum laciniatum*)

E. One large plant found at Homestead Farm, Shishford, near Newbridge 4188 DB.

Phacelia (*Phacelia tanacetifolia*)

E. This plant made a fine show for several metres on south verge of the Downs Road over Mersley Down, 5587 RG. This is the first well established record of this plant, which is sometimes grown by farmers.

Narrow-leaved Lungwort (*Pulmonaria longifolia*)

N. Recorded from the south-eastern arm of Chalkclose Copse, Marks Corner 4692 mo. This is a previously unrecorded site.

Common Fiddleneck (*Amsinckia micrantha*)

C. Four plants found growing by a path edge on St Helen's Duver 6388 GT. This is the first Island record for this increasing alien species.

Slender Vervain (*Verbena rigida*)

C. A single plant growing on disturbed ground at an oil-well exploration site in Bouldnor Copse 3890, DB. First Island record away from cultivation.

Weasel's-snout (*Misopates orontium*)

N. Recorded from a front garden in Bannock Road, Whitwell 5178, a new location PS.

Hybrid Eyebright (*Euphrasia confusa* x *nemorosa*)

N. Recorded from slumped coastal cliffs at Bouldnor 3890, PS (conf. Alan Silverside). This is the first Island record for this hybrid.

Yarrow Broomrape (*Orobanche purpurea*)

N. It has long been known from Brading churchyard 6087 CP, but this year it was remarkably abundant and widespread within the yard.

Blue Globe-thistle (*Echinops bannaticus*)

E. A single flowering patch was found in scrubby, uncultivated ground near Parsonage Farm, Newchurch 5685 DB. First established record for this garden escape.

Great Lettuce (*Lactuca virosa*)

N? 11 plants growing through dumped hardcore at Thorley Street 3788 GT.

FLOWERING PLANTS AND FERNS – 2006

N. Around 100 plants growing on the wall of Osborne House walled garden 5194 PS.

Argentine Fleabane (*Conyza bonariensis*)

E. Seven plants on growing on a lane side near the town hall at Yarmouth 3589 PS.

Creeping Zinnia (*Melampodium montanum*)

Several plants growing in pavement cracks outside of Chine Inn, Shanklin 5881 DB, identified by Eric Clement, still in flower on 31 December. This plant is grown in window boxes and hanging baskets. It was first recorded as an escape, new to Britain in 2003. First Island record.

Gallant-soldier (*Galinsoga parviflora*)

E. Well established on the south facing bank of Ryde Canoe Lake, Ryde 6092 DB.

Large-flowered Tickseed (*Coreopsis grandiflora*)

E. Now well-established on a south-facing sunny bank by the main road at Arreton Barns, Arreton 5386, where it has been known for a number of years MB.

American Skunk-cabbage (*Lysichiton americanus*)

E. Well established by the stream flowing through Saltmoor Copse at Robin Hill Country Park 5387 CP. The first Island record as an established species; it was not here 40years ago.

Italian Lords-and-ladies (*Arum italicum* subsp.*italicum*)

N. Well established clump in the education area, amongst bark chippings, at Parkhurst Forest 4890 DD.

Thin-spiked Wood-sedge (*Carex strigosa*)

N. A few clumps in damp areas by the stream flowing through Saltmoor Copse, a part ancient woodland at Robin Hill Country Park 5387 CP.

Dwarf Sedge (*Carex humilis*)

N. Recorded for the first time on the north facing slope near the top of Afton Down 3685 PS (conf. David Pearman). The largest clump was 2m across and there were several small satellite patches. Clearly long established but overlooked at this site. This is a remarkable find, an almost certainly native site of a plant whose British headquarters are on chalk grassland in Wiltshire and Dorset. There is no previous suggestion that its distribution extended to the Isle of Wight. Although abundant in suitable sites within its core range, populations at the edge of its range on chalk are frequently small.

Rush-leaved Fescue (*Festuca arenaria*)

N. Found on Norton Spit 3589 PS (conf M. Wilcox). First recorded in 2004 at Norton Spit (PS).

Lesser Canary-grass (*Phalaris minor*)

C. A few plants found at Gatcombe 4885 SB.

Nit-grass (*Gastridium ventricosum*)

N. Around 30 plants in the field margin of a winter wheat crop on Bleak Down 5080 GT.

Annual Beard-grass (*Polypogon monspeliensis*)

C. A few plants at the base of a wall at the south end of Arctic Road, Cowes 4994 SB.

Tor-grass (*Brachypodium pinnatum*)

FLOWERING PLANTS AND FERNS – 2006

N. An invading clump located on the south slopes of Afton Down 3585 PS. This can be an aggressive coloniser of chalk grassland to the detriment of other species. It has been removed by the National Trust.

Hybrid Couch (*Elytrigia x obtusiuscula*) (*E. aetherica* x *juncea*)

N. This hybrid was found to be rather frequent on St Helen's Duver 6389 PS (conf. Tom Cope). First modern record for this hybrid.

Autumn Squill (*Scilla autumnalis*)

N. This plant had a good flowering year in August in its sole Island station, St Helen's Duver 6389. Remarkably, a number of plants were seen to be producing a second flush of flowers on 27th October.

Turkish iris (*Iris orientalis*)

E. Well established clumps of this white flowering iris were recorded from a ditch by the Military Road at Brook 3883 MB. The first Island record.

New Zealand Flax (*Phormium tenax*)

E. A single plant with a flower spike was seen growing at the base of a wall by the coastal revetment at Bonchurch 5777 CP.

Marsh Helleborine (*Epipactis palustris*)

N. Around 200 plants were recorded from the slumped cliffs near Brambles Chine, Colwell 3288 PS. This is further evidence that the Totland population is spreading eastwards.

Pyramidal orchid (*Anacamptis pyramidalis*)

N. There were around 20 plants in Brading churchyard, and others by the verge by Vicarage Lane, Brading 6087 CP. These are sites off the chalk.

Frog orchid (*Coeloglossum viride*)

N. A conservative estimate of 64 flowering plants was made on 9 July on the north side of Afton Down 3685, with more flowering stems just starting to appear mo.

Recorders

| | | | |
|----|-------------------|----|------------------------|
| AM | Anne Marston | mo | Botany Group of IWNHAS |
| BS | Bill Shepard | PA | Pat Acock |
| CP | Colin Pope | PS | Paul Stanley |
| DB | David Biggs | RG | Richard Grogan |
| DD | Dave Dana | SB | Sue Blackwell |
| DW | Daphne Watson | SR | Sean Ridler |
| GA | Graham Ackers | TS | Tim Slade |
| HH | Hilary Higgins | TT | Tony Tutton |
| HM | Hugh Milner | VB | Vic Barnett |
| MB | Margaret Burnhill | | |

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FUNGI NEW TO THE ISLE OF WIGHT, 2006

Jackie Hart

We had a prolonged spell of very dry weather until the rain came in September. The main season during the autumn provided damp conditions ideal for fungi and we had a good season.

The following fungi have not previously been recorded on the Island:

Agarics and Boleti

| | |
|--------------------------------|---|
| <i>Galerina graminea</i> | Alverstone Village Hall lawn, 28 th October, A. Outen |
| <i>Inocybe hirtella</i> | Briddlesford Copse, under oak , 29 th October, A. Outen |
| <i>Inocybe pseudodestructa</i> | Alverstone Village Hall, under lime, 28 th October, A. Outen |
| <i>Mycenella salicina</i> | The Landslip, Bonchurch , 25 th November, C.R. Pope |

Aphylophorales

| | |
|--------------------------------|--|
| <i>Clavaria krieglsteineri</i> | Alverstone Village Hall lawn, 28 th October, A. Outen |
|--------------------------------|--|

Ascomycetes

| | |
|-------------------------------|--|
| <i>Calonectria erubescens</i> | Borthwood Copse, 28 th October, A. Outen |
| <i>Dasyscyphus brevipilus</i> | Borthwood Copse, 28 th October, A. Outen |
| <i>Dasyscyphus brevipilus</i> | Briddlesford Copse, 29 th October, A. Outen |
| <i>Dasyscyphus sulphurous</i> | Borthwood Copse, 28 th October, A. Outen |
| <i>Trochila craterium</i> | On ivy leaves by Alverstone Village Hall, 28 th October, A. Outen |

Hyphomycetes

| | |
|-----------------------------------|--|
| <i>Botrybasidium aureum</i> | The Landslip, Bonchurch, 25 th November, D.T. Biggs |
| <i>Colletotrichum liliacearum</i> | Borthwood Copse, 28 th October, A. Outen |
| <i>Fusidium griseum</i> | Briddlesford Copse, 29 th October, A. Outen |

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ADDITIONAL RECORDS OF PLANT GALLS FROM THE ISLE OF WIGHT

Dr.D.T.Biggs

Only six new galls have been recorded since the publication of the last list of new galls (Biggs, 2007) and one of these was caused by the alternate generation of a gall wasp first found here in 2003.

FUNGI

Sphaerotheca spireae Sawada on Meadowsweet *Filipendula ulmaria*.

At a meeting of the Botanical Section of the Society held at Redway Farm, Merstone, SZ5384 on 16.7.2005 Dave Dana found a plant of Meadowsweet grossly affected by this powdery mildew (*Ascomycota: Erysiphales*) The plant was distorted, with thickened and twisted stems and leaves and completely covered with a thick white growth of the fungal mycelium. Since this first record similar galling has been found at four other sites. This fungus is found throughout Europe, Asia and North America, but only on *Filipendula* and *Spiraea*.

Urocystis violae (Sow.) A.Fischer v. Waldh. on Sweet Violet *Viola odorata*.

Sue Blackwell found leaves of a Sweet Violet galled by this Smut Fungus (*Ustilaginomycetes*) in Froglands Lane, Carisbrooke, at SZ480870 on 27.4.2006 She had noticed that some of the leaves showed pale, thickened patches. Further examination revealed that these were yellowish, roughly circular, 5mm x 4mm and visible on both leaf surfaces. Low power microscopy demonstrated tiny black spherical collections of smut spores. This fungus can also attack the petioles, the leaf veins and the rootstock causing thickening of these parts. It only affects *Viola* and is reported in the literature to be common and widespread in England.

Ustilago hypodytes (Schlecht.) Fries. on Lyme-grass *Lymus arenariae*.

This is another galling Smut Fungus (*Ustilaginomycetes*) which Colin Pope found at Bembridge Point SZ642887 during another field meeting of the Botanical Section on 24.6.2006. Many of the Lyme-grass plants were noticed to have deformed flowering spikes with thickening and twisting of the flower-stalks and to show considerably swollen internodes. Large black spore masses were found beneath the leaf sheaths and small collections of spores in the sterile flower spikes. These are the external manifestations of the fungus which infects the plants systemically, surviving year after year in the rhizomes. This smut affects several different species in the grass family *Poaceae* but is most spectacular in seashore grasses. It is reported to be common and widespread. It can render the plant sterile.

ACARI

Aceria heteronyx (Nalepa) on Field Maple *Acer campestre*.

The Botanical Section meetings have been a rich source of new galls during 2005 and 2006. At the first meeting of 2006 the Society visited Atkey's Copse, Shalfleet on 11th March. On a Field Maple at the very edge of the copse Mike Cotterill noticed some very strange swellings at the base of the bare one-year old twigs. These galls consist of corky, warty irregular swellings 3x5mm forming a complete or almost complete ring around the twigs and a light brown in colour. Sectioning one at the time I was surprised not to find a central cavity with a larva. Later, using a low power microscope it was obvious that each annular growth was formed of several individual galls, each 1 - 2mm across, merging together. High power microscopy revealed the corky interior to contain many gall mites (*Eriophyidae*) Apparently this gall is also found on Norway Maple *Acer platanoides* on the continent. It is described as rare in England in the most recent literature.

ADDITIONAL RECORDS OF PLANT GALLS FROM IOW

DIPTERA

Lapsioptera carophila F. Löw. 1874 on Hemlock Water-dropwort *Oenanthe crocata*

A walk from Guyer's Heath towards Watchingwell on 23.6.2006 led me past a large patch of Hemlock Water-dropwort. The early fruiting heads showed many swollen achenes, galled by the Gall Midge *Kiefferia pericarpicola* but more interesting were the several oval or spindle-shaped galls at the base of the umbels. Each swelling measured 15mm in length and 4 mm at its maximum width. Within were visible several separate larval chambers each containing a red gall midge (*Cecidomyiidae*) larva. Later, using the microscope, the larval chambers were seen to be lined by a fungal mycelium. This is a typical 'Ambrosia gall'. The fungal spores are introduced into the plant by the adult female gall midge at the time of egg-laying. These midges have special spore-bearing organs on their abdomens for this purpose. This also of course aids spore-dispersal. The feeding activities of the larva which hatches from the egg cause the gall to develop. The fungus then grows to line the gall chamber and acts as a source of food for the growing larva. This gall midge galls various members of *Apiaceae* (*Umbelliferae*) particularly *Daucus* and *Pimpinella*. It has been a pest of Caraway in Holland in the past.

HYMENOPTERA

Andricus grossulariae (Giraud 1859) on Turkey Oak *Quercus cerris*

In Volume 20 of the Proceedings (Biggs, 2004) the arrival on the Island of this gall wasp (*Cynipidae*) was recorded with the finding of the asexual generation gall (Sea anemone Gall) on the acorn cups of our native Pedunculate Oak *Quercus robur*. I had found three poor specimens of these galls at Fairlee on 10.2.2003 and none since. The alternate, sexual generation induces galls on the catkins of the introduced Turkey Oak *Quercus cerris*. These were first recorded in England in May 2000 in Windsor Great Park. Not until 2002 was it shown by Pat Walker of Imperial College that these catkin galls were caused by the same gall wasp species that induces the 'Sea Anemone Gall'. The catkin galls appeared in great numbers on the Island in 2006. The first specimens were found on a tree just behind the beach at Osborne at SZ524954, on 19.5.2006. It is interesting that I found several 'Sea Anemone Galls' on the alternate generation at the old Browndown Range outside Gosport, just four miles across the Solent from Osborne Bay, the previous autumn. An individual gall is somewhat flask-shaped, rather like a tapering blackcurrant and measures 5.5 - 7.5 mm along the vertical axis, and 5.5 mm in diameter across the base. Initially pale green with a covering of fine pink hairs and succulent in texture, the galls develop from the male flowers, usually several on each catkin. As the gall matures it becomes red then black and woody hard and soon loses its covering of hairs. Catkins which are affected tend not to fall so galled catkins can be found on the trees until autumn winds bring them down. Because of their extreme hardness at maturity they can easily be found on the ground in winter. Since first finding these galls at Osborne, they have subsequently been found at Bembridge, Fairlee, Parkhurst Forest, Quarr Abbey Woods, Northwood Park, Dodnor and at Appley Park.

This gall wasp has been expanding its range across Europe since 1992. It is native to South and Southeastern Europe. In 1910 it was only known from North Africa, Italy, Sicily, Hungary, Romania and Austria. By 1965 it had been found in Germany and by 1997 it was known in Spain where Cork Oak *Quercus suber* is its secondary host.

Since its first discovery at Osborne on Turkey Oak I have found the galls there on Lucombe Oak *Quercus x crenata* which is a hybrid between Turkey Oak and Cork Oak, and probably on what is Cork Oak itself. As expected, the alternate generation 'Sea Anemone Gall' was equally widespread on the Island during the summer and autumn of 2006.

ADDITIONAL RECORDS OF PLANT GALLS FROM IOW

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**THE ANGLO-SAXON CHARTER BOUNDS
OF THE ISLE OF WIGHT
PART 2: THE EAST MEDINE**

John Margham

Abstract

This paper is the second of a two-part study of the Anglo-Saxon charter bounds of the Isle of Wight. The primary aim of the study is the reconstruction of the landscape in the later Anglo-Saxon period. Charters defining estates in the eastern half of the Island are examined: Bathingbourne, Branstone, Ashe, Fishbourne and Wroxall. The charter bounds are located in the modern landscape, inferences made about the Anglo-Saxon landscape, and the bounds related to Domesday Manors. The identification of Linlande, which may have been located on the Island, is discussed. The study concludes with an examination of the charter boundary clauses in relation to other sources, to produce a reconstruction of the landscape of the Isle of Wight in the later Anglo-Saxon period.

Introduction

There are four extant Anglo-Saxon charters documenting estates in the eastern half of the Isle of Wight. Three of these include Old English boundary clauses (S 1662, S 1663, S 842) ¹, with the last of these three defining four separate estates on the Island. All three of the charters with bounds include estates centered on Bathingbourne. These charters date from the second half of the tenth century. The latest charter (S 1391) was produced in the mid-eleventh century and documents an exchange of estates. It does not have a boundary clause but can be reconstructed from topographical evidence and later documentary sources.

The boundary clauses in Anglo-Saxon charters provide invaluable contemporary information about the landscape once they have been defined in the modern landscape. This evidence can be used in conjunction with other sources to produce a reconstruction of the appearance of the various landscape regions of the Isle of Wight for the later Anglo-Saxon period.

The Charter Bounds of the East Medine

S 1662, Bathingbourne and Linlande

This was a charter of King Eadred (951x955) concerning two hides at Beaddingaburnan (Bathingbourne) and one hide at Linlande (unidentified). It is a fragmentary text recorded in the Evesham cartulary. The text of the charter has been erased to make room for later entries, starting with S 1663. Only the bounds and the list of witnesses have survived. The bounds of Beaddingaburnan are followed by the bounds of Linlande (Birch 1024; Finberg 1964, no.72).

The Bounds of Bathingbourne

Dis synd þara twegra hyda land gemæra to Beaddingaburnan. ærest of þam stanihtan forða suþ 7lang dices. oð þone suþ healf on ðone stan. þonon west 7lang díc on tidearding mor. of þære díc norð 7lang mores be healfan more on þam gemyþum. west 7lang beaddingaburnan on þone stanihtan forðan. 7seo ut læs mid oprum mannum gemære. (Birch 1024).

These are the boundaries of the two hide estate at Bathingbourne. Starting from the stony ford south along the ditch to the south side to the stone thence west along the ditch to Tidheard's moor. From that ditch north by the side of the moor to the confluence west along the Bathing Bourne to the stony ford. And the outlying pasture common with other men ².

Identifying the Bounds (Fig 1)

The bounds of Bathingbourne in S 1662 have been discussed by Kökeritz (1940,145) and some comments have been made by Forsberg (1950,209-10).

The stony ford is the point where Bathingbourne Lane now crosses the stream by a small bridge, to the north of Bathingbourne Farm. From this point, the bounds of Bathingbourne would have followed the line of the stream in a south-easterly direction, curving round to a southerly direction. This stream, from the site of the ford, forms the parish boundary between Godshill and Newchurch. The stone cannot be identified in the modern landscape, but would appear to have been in a location near the stream some 280 metres to the north of Bobberstone Farm. Such a location marked the southern limit of Bathingbourne Farm in 1838 (IWCRO JER/T/158,159; see below). It may very well be an identical location to that of 'the other stone' in the bounds of S 1663, which would place the stone on or near the path running northwards from Bobberstone, rather than alongside the stream. The 'stone' element in the place-name Bobberstone may be fortuitous. The early spellings, commencing in the mid-fifteenth century, are ambiguous (Mills 1996,30-31). The vast majority of 'stone' place-name suffixes on the Isle of Wight are derived from Old English *tūn*, but Bobberstone may be a parallel for Mottistone, where the suffix is derived from Old English *stan*, 'stone'. From the stream, the bounds of S 1662 went westwards along a ditch. There is however a locally prominent ridge (an outlier of sandrock beds within the ferruginous sands) between these two watercourses. It would appear that a location is missing from the bounds of S 1662 in this area, with the omission of *Aðulfe's hylle* (see S 842ii, below). The boundary between the north flowing stream in the Bobberstone area and the ditch terminating at *tidearding mor* has been reconstructed through reference to the tithing apportionment for Godshill parish (IWCRO JER/T/158,159). The southern boundaries of Bathingbourne Farm and Lessland Farm in 1838 have been plotted in this reconstruction. It is perhaps significant that the southern boundary of Bathingbourne as defined in 1838 forms a significant lynchet between Lessland Lane and the footpath between Green Acres Farm and Bobberstone. To the west of Lessland lane, after a further 425 metres, the *dīc* in the bounds of S 1662 also formed part of the southern boundary of Lessland Farm in 1838. The western end of this ditch is identified as part of 'Tidheard's Moor', and from the end of this ditch, the bounds run north along the stream by the side of the moor. *Tidearing mor* can thus be identified with *Tidelingham* (Hockey 1991 map 4, nos. 1,65,69,70,155,180-189), an area of rough pasture which was also known as *Ryde Mede*. The 'moor' place-name is preserved locally in Moor Farm, 400 metres to the west of the confluence of the *dīc* and the stream flowing northwards. The bounds of S 1662 then follow the stream northwards, along the line of the Arreton/Godshill parish boundary. 'The confluence' is the point where this stream meets the stream flowing westwards from the starting point of the bounds. From here, the Old English bounds describe the boundary as running 'west'. As Kökeritz has pointed out, "The word *west* in west *7lang beaddinga burnan* must be an error for *east* or possibly a corruption of *b' eft* (then back); the second survey in Hyda [S 842], which seems to deal more or less with the same piece of land has *eft* here" (Kökeritz 1940,145). The bounds thus follow the stream, named as the Bathing Bourne, back to the starting point of *þone stanihtan fordan*. The stream here also forms the parish boundary between Arreton and Godshill. This reconstruction of the bounds of S 1662 is coterminous with the combined areas of Lessland Farm and Bathingbourne Farm as defined by the Godshill tithing apportionment of 1838.

The Anglo-Saxon Landscape of Bathingbourne

The bounds of S 1662 provide limited information about the landscape in the tenth century. The starting point of the bounds was obviously a ford, which was at an unspecified later date replaced by a small bridge. *Tidearding mor* is the only location in the bounds which tells us much about the contemporary landscape. This would have been an area of rough pasture where reeds could have

been obtained, as is suggested by its later name of *Ryde Mead*.

Bathingbourne, Domesday Book and outlying pasture

The last part of the Old English boundary clause of S 1662 can be translated as 'And the outlying pasture common with other men'. The Domesday Book entry for Bathingbourne is described as "The Down and Bathingbourne" (Munby 1982,39c). It would appear that *Ladone* of Domesday was the location of the outlying pasture belonging to Bathingbourne in the mid tenth-century. By 1066, The Down and Bathingbourne paid tax for four hides, suggesting that 'The Down' had been developed into a permanent settlement from being the outlying pasture a century or so earlier. The outlying pasture of Bathingbourne was therefore chalk downland so must have been situated at least 2½ kilometres beyond the bounds of S 1662. It has been suggested that *Ladone* can be identified with Down Court, high up in the southern chalk massif (Kökeritz 1940,252-3). If this identification is correct, then the outlying pasture of Bathingbourne was 6 km beyond the bounds of S 1662. With the possible exception of *Linlande* (below), Bathingbourne is the only instance of an Anglo-Saxon boundary clause relating to the Island itemizing detached pasture.

The varied history of the ownership of Bathingbourne between the mid-tenth century and 1086 is outlined under S 1663 (below).

Linlande

The second set of bounds in S 1662 relate to 'the third hide at Linlande':

7 þis is þara þriddan hiwiscas land gemære æt linlande. of linlande norð weard suð 7lang mearce on þone herpað. suð 7lang herpaþs on þone ricsihtan mere. þón west on þa mearce. þón norð 7lang mearce on þa hæþenan byrgenan. of þam byrgenum norð 7lang mearc on þæne stan. þonon east on linlande norðweard. 7 seo ut læs 7 seo wudu læs mid oþrum mannum gemære (Birch 1024).

'These are the boundaries of the third hide at Linlande. From the north part of Linlande south along the boundary to the highway. South along the highway to the rushy pond then west to the boundary. Then north along the boundary to the heathen burial place. From that burial place north along the boundary to the stone. Thence east to the north part of Linlande. And the outlying pasture and the woodland pasture common with other men'.

It is not certain whether *Linlande* relates to an estate of one hide on the Isle of Wight or elsewhere in England. The phrase 'the third hide' does however suggest that *Linlande* may have been located in the vicinity of Bathingbourne. Also, there is a reference to outlying pasture in the bounds of *Linlande*, which is similar to the reference in the bounds of Bathingbourne in the same charter. This suggests that *Linlande* was in a geographically similar area to Bathingbourne. Kökeritz has suggested that "If the first *n* were an error, *linlande* might refer to Lessland" (1940,145,note 1). There are however two reasons why *Linlande* cannot be identified with Lessland:

1. The reconstruction of the two hides of Bathingbourne in S 1662 includes the whole of the area of Lessland Farm
2. The bounds of *Linlande* in S 1662, although describing an area of one hide (Lessland Farm being approximately half the area of Bathingbourne as defined in S 1662), do not accord with the topography of the Lessland area. No mention is made of ditches or streams, both of which would have featured prominently in the bounds of Lessland.

The phrase 'And the outlying pasture and the woodland pasture common with other men' appended to the bounds of *Linlande* give some guidance to the location of this one hide. Assuming that a parallel is valid with the similar phrase appended to the bounds of Bathingbourne in S 1662, then 'the outlying pasture' must relate to chalk grassland, and this resource would not have existed

within the bounds of *Linlande*. The reference to 'the outlying pasture' therefore indicates that *Linlande* itself was not situated within the area of the lateral chalk ridge or the southern chalk massif. Similarly, the reference 'the woodland pasture' indicates that there was no wood-pasture available within the bounds. This reference to 'the woodland pasture' implies that *Linlande* was not situated within the extensive wood-pasture area of the Island north of the lateral ridge. A location within the Island's southern vale is the only possibility, in an area without direct access to chalk grassland.

The distribution of place-names with a -land suffix may be of relevance in locating *Linlande*. Many -land place-names relate to settlement sites within the 'northern lowlands' of the Island, which was predominantly an area of clayland heaths and wood-pasture. These locations can be excluded as *Linlande's* wood-pasture was at some distance beyond its bounds. The only two instances of -land place-names in the 'southern vale' are Lessland and Wackland. Lessland was not the location of *Linlande* (above). Wackland can also be dismissed as it is bounded on the north side by the River Yar. No mention is made of a watercourse in the bounds of *Linlande*. A river such as the Yar would surely have featured in the bounds if they related to Wackland.

Linlande would thus appear to be a lost place-name. The bounds indicate that it was not situated in an area with significant watercourses, that it was partially bounded on the eastern side by a roadway of more than local significance (*suð 7lang herpaps*), and a 'heathen burial place' lay on its western boundary.

Gelling (1978,157) has discussed the term *hæthenan byrgels* 'heathen burial-place': "There is no general correlation between this boundary-mark and tumuli, so it seems probable that the reference is to Anglo-Saxon pagan cemeteries the position of which was remembered in the ninth and tenth centuries, though there were no mounds to mark the graves". All of the known pagan Anglo-Saxon burial sites on the Isle of Wight were situated on, or just beyond the margins of, the lateral chalk ridge. The former existence of burial sites on the northern margins of the southern massif is however a possibility. It would therefore appear that *Linlande* was probably on the northern margins of the southern vale, or possibly on its southern margins. The reference to outlying pasture in the bounds of *Linlande* does not disqualify it from being in physical proximity to chalk grassland. The Domesday entry for 'Knighton and the Down' (Munby 1982,39c) refers to a location immediately to the south of the lateral chalk ridge which would appear to have had downland pastures at Down Court, 11 kilometres away to the south-west (Kökeritz 1940,253). Knighton would not have had access to chalk downland immediately to the north, as this was part of the Asheby estate (see S 842iii).

Linlande has thus not been identified, but would appear to relate to a lost place-name on the Isle of Wight. It was situated within the southern vale of the Island, probably on its northern margins adjoining the lateral ridge, with an important road forming part of its eastern boundary. The identification of *Linlande* with a specific location and of its bounds may possibly lead to the discovery of a lost pagan Saxon burial site.

The place-name of *Linlande* is of interest regarding the history of the landscape within the Anglo-Saxon period. The first element *lin* is Old English 'flax' (Sweet 1896,108). *Linlande* therefore means 'land where flax is grown'. One meaning of -land in settlement names is 'newly cultivated land' (Gelling 1984,245-9). This raises the possibility that at *Linlande* an area which had not been cultivated within living memory had been prepared for the production of flax at the time the place-name was formed. The latest date for the origin of this place-name would be the mid tenth century, ie. the date of the charter. Gelling suggests that -land place-names were formed from the seventh century onwards (Gelling and Cole 2000,279), so *Linlande* may have been a settlement site of some antiquity by the time S 1662 was formulated.

S 1663, Bathingbourne

This was a grant made by Eadwig, king of the English and ruler of many peoples round about

(955x959), to his theign Æthelgeard. It consisted of five *mansae* at *Beaddingaburnan* (Bathingbourne) in the Isle of Wight, free of all but the three common dues (Finberg 1964,no.86).

The Bounds of S 1663

Dis synd þa gemære to beaddingaburnan. Ærest of beaddingaburnan east 7lang díc on þone stan. þonon suð 7lang þes grenan weges on þone oðerne stan. of þam stane on þone sandihtan hærepof. þonon on risc mere. of risc mere on stan beorg. þón. on holan broc. of holan broce on beaddingaburnan. siþþan norð 7lang beaddingaburnan on þa east langan dic (Kökeritz 1940,144).

'These are the boundaries of Bathingbourne. Starting from the Bathing Bourne east along the ditch to the stone. Thence south along the green way to the other stone. From this stone to the sandy highway. Thence to the rush pond. From the rush pond to the stone hill. Then to the hollow brook. From the hollow brook to the Bathing Bourne. Then north along the Bathing Bourne to the eastern long ditch'.

Identifying the Bounds (Fig 2)

The bounds of S 1663 have been discussed by Grundy (1926,103-4), Kökeritz (1940,144-5) and Forsberg (1950,209-10).

The starting point for the bounds differs from the other two charters relating to Bathingbourne (S 1662, S 842ii). The bounds of S 1663 commence at the confluence of 'Bathing Bourne', the stream running northward from south of Moor Farm, and the westwards flowing stream from Bathingbourne, at a point east of Budbridge. From this confluence the bounds follow the Arreton/Godshill parish boundary eastwards along the stream. The next point on the bounds would appear to be in the vicinity of 'the stony ford', the starting point of the bounds of S 1662 and S 842ii. It is described as *þone stan* 'the stone' and would appear to refer to a location just to the north of the ford which was called Stone on the maps of 1775, 1781 and 1785 and more recently known as Stone-shell (Kökeritz 1940,145). The bounds then run southwards 'along the green way', which is the modern metalled road known as Bathingbourne Lane, which after 550 metres turns abruptly to the west at Green Acres Farm. The line of the road however continues southwards as a footpath. Kökeritz has commented on *þes grenan weges* that "... it is tempting, indeed, to identify this OE boundary mark with (ditch from) *Grenewaye* gate (to Frenche myll brooke) 1576 Wor, and (the Packeway from Frenchemyll to) *Grenewaye* 1577 Wor." (1940,145). The next point on the bounds, *þone oðerne stan* 'the other stone' may very well be identical to *ðone stan* 'the stone' in the bounds of S 1662, which would appear to have been located just to the north of Bobberstone. In his work on S 1663, Grundy commented that: "The 'other' stone was probably at or near the modern Bobberstone ... in the name of which the full name of the old stone may survive" (Grundy 1926,104). From 'the other stone' the boundary of S 1663 continues to 'the sandy highway', which was identified by Grundy as the line of the road from Shanklin to Godshill, where the place-name Sandford, preserves something of the description of the road from the tenth century. The alignment of the bounds on approaching the eastern end of Sandford would appear to have been preserved by a length of hedgerow to the north of the road, with the bounds crossing the road just to the east of the chapel. To the south of the road the bounds of S 1663 continued in a southerly direction, probably following the green lane in the modern landscape, which formed the eastern boundary of Redhill Farm in 1838 (IWCRO JER/T/158,159). From the southern end of this green lane, the bounds may very well have followed the line of a sunken way upslope to the west towards the next location in the bounds, the *risc mere* 'rush pond'. There is a small pond in the modern landscape to the north of Gat Cliff and the 1:25,000 map of 1985 indicates a larger one to the east. This is now dry, but a spring is marked at this location on the first edition of the Ordnance Survey six-inch map. Both of these sites are in the area of landslip on the northern slope of the southern massif. Either of these sites or a former pond in the same area may very well have been the 'rush pond' in

the bounds. The bounds of S 1663 would therefore have followed the northern pale of Appuldurcombe Park, which in its present form originated much later than the tenth century, but would probably have formed the northern boundary of Wroxall in the mid-eleventh century (S 1391, below). Beyond the 'rush pond', the next point in the bounds is *stan beorg* 'stone hill'. Kökeritz said that this may "refer to the conspicuous hill on which Godshill church now stands" (1940,145) but a more plausible suggestion is the prominent carstone hill immediately south of Sainham. This location accords well with the next point on the bounds, *holan broc* 'hollow brook'. This can be identified with the small but relatively deep valley running northwards from north-east of Sainham to the eastern end of Godshill village. The road running north-east to the northern end of this valley is named 'Hollow Lane'. From 'hollow brook' the bounds of S 1663 go on to *beaddingaburnan*, which in these bounds relate to the stream to the east of Moor Farm which forms the Arreton/Godshill parish boundary. The starting point of the bounds is at the confluence to the east of Bud-bridge.

Forsberg (1950,209-210) has argued that the bounds of this charter relate to an area within Newchurch parish rather than within Godshill parish, ie. further to the east. This hypothesis is based upon the argument that the stream-name *beaddingaburnan* (in S 1662, S 1663 and S 842) must all relate to the same stream, ie. the stream which runs northwards from French Mill, then north-west passing the hamlet of Bathingbourne. Whilst it is acknowledged that the present reconstruction necessitates two streams in the area having been named *beaddingaburnan* (Figs 1, 2 and 4), it is quite possible that the two watercourses on the margins of the estate would have been referred to as *beaddingaburnan* in different charters. The other boundary markers in S 1663 make less sense if the estate had been located within Newchurch parish, and it is unclear why an estate in the Princelett/Whitley Bank area should have been referred to as Bathingbourne.

The Anglo-Saxon Landscape of Bathingbourne

The bounds of S 1663 give some information about roads in the tenth century. Bathingbourne Lane, and its continuation southwards which is now a footpath, was described as *þes grenan weges* 'the green way'. This can be contrasted with *þone sandihtan hærepop*, 'the sandy highway', a more important road which now forms part of the main road from Shanklin to Godshill. Before the advent of road metalling, 'sandy' would be an apt description of the road surface in this area, in this area of ferruginous sands. The place-name Sandford was first recorded in 1086, but the *-ford* element may have been used to form this place-name long before the eleventh century (Cox 1976; Gelling 1984,67; Copley 1986,70).

S 1663 and Domesday Book

The bounds of the five hides of S 1663 include three Domesday manorial sites, Bathingbourne, Lessland and Sandford. The inclusion of the Sandford area in Bathingbourne was only temporary (below). Sandford with Week was rated at three hides in 1066 (Munby 1982,39c). This area would appear to be identical with the southern part of S 1663 and accords with the opinion of the late S.F. Hockey that Week, Domesday *Wica* and *Wyk* in the *Nomina Villarum* of 1316, was in the vicinity of Appuldurcombe, rather than referring to Week Farm (personal communication). The place-names Week and Sandford are used interchangeably in references to the area in the charters of the Redvers family (Bearman 1994).

Bathingbourne from the mid tenth century to 1086

The history of the land ownership of Bathingbourne from the date of S 1662 to the time of Domesday Book is quite convoluted and is outlined here:

1. King Eadred (951x955) granted the two hides of Bathingbourne to a now unrecorded individual (S 1662). Reconstruction of the bounds indicate that these two hides included Lessland, and in addition to the two hides the grant included 'the outlying pasture common with other

men', which was probably an area of chalk downland.

2. King Eadwig (955x959) granted five hides of Bathingbourne to Æthelgeard (S 1663). Reconstruction of these bounds indicates that the five hides included Lessland and Sandford. There is no mention of outlying pasture in this document.
3. Bathingbourne was acquired by Lufa (Finberg 1964,no.125).
4. Bathingbourne was included in the 13 hides of land which was forfeited to the crown by the criminal Lufa (Finberg 1964,no.124; S 842).
5. The 13 hides which had been forfeited by Lufa were bought from the king by ealdorman Æthelmær for 100 mancuses of gold (Finberg 1964,no.125; S 842).
6. The will of Æthelmær (971x982) bequeathed the 13 hides of land which had been purchased from the king to Winchester New Minster. This bequest was confirmed by king Æthelred in 982 on the death of Æthelmær. This included the two hides of Bathingbourne which were almost coterminous in area with the two hides of S 1662 but with the eastern boundary being the same as S 1663 between Bathingbourne and Bobberstone, ie. following the 'green way', rather than the stream. There is no mention of outlying pasture in S 842.
7. The estates belonging to the New Minster which were bestowed by William I on his officers were said by Dugdale to have included Bathingbourne (Kökeritz 1940,26) ³, but the alienation of Bathingbourne from the New Minster must have pre-dated 1066. By this date 'The Down and Bathingbourne' were held by Odo from King Edward in freehold. This estate paid tax for four hides but would not have included Lessland, as this was accounted for under two other Domesday entries. Sandford with Week was held by King Edward as a separate manor (Munby 1982,39c).
8. In 1086 The Down and Bathingbourne were held by the king in lordship.

S 842, Heantune, Bathingbourne, Meolocdune and Stathe

This charter dates from 982, being issued by Æthelred, King of all Albion, to the New Minster at Winchester: Confirmation of a bequest by the earldorman Æthelmær [Finberg 1964,no.125, 971x982], who had purchased from the king, for 100 mancuses of gold, certain lands forfeited by a criminal named Lufa, and subsequently left them to the Minster, where he lies buried, 2 manentia [hides] at Heantune, 2 at Beaddingaburnan (Bathingbourne), 2 at Meolocdune and 1 at Stathe, all in the Isle of Wight, also in Portsea Island at Frodingtune (Fratton) and at Suggincgwyrthe (Segenworth in Titchfield), with a hay-mead between the River Meon and the mill leat of King's Mill; free of all but the three common dues (Finberg 1964,no.132) ⁴.

The bounds of Heantune (S 842i)

Ðis sind þara twegra hida landgemæra to Heantune: ærest, on þone stænihtan ford east, andlang herpaðes; of þan herpaðe, swa hit gemearcod is, to ðære fulan dic; of þære fulan dic to wynnangeate; of wynnangeate andlang mearce, on þa stanynan hlyfan; of þære hlyfan, andlang mearce, on þa oðre stænenan hlyfan; of þære hlyfan innan þa widan dic forð, andlang dic, on Beadingaburnan, to þære ealden hide ðe to niwan mynstre ær hyrde on Wintanceastre; þanon on gerihte up andlang burnan eft on þone stænihtan ford (Edwards 1866,219-220).

'These are the boundaries of the two hide estate of Heantune. Starting from the stony ford east, along the highway. From that highway as it is marked out, to the dirty ditch. From the dirty ditch to the meadow (or pasture) gate. From the meadow (or pasture) -gate along the boundary to the stony shelter. From that shelter along the boundary to the other stony shelter, from the shelter into the wide ditch forward, along the ditch to the Bathing Bourne, to the old (or main) hide formerly belonging to Winchester New Minster. Thence straight up along the stream returning to the stony ford'.

Identifying the Bounds of Heantune (Fig 3)

The bounds of Heantune have been discussed by Kökeritz (1940, 145-6).

The bounds start at 'the stony ford', which can be identified with the ford at Bathingbourne, which is also the starting point of the bounds of Bathingbourne in S 1662 and of Bathingbourne in this charter. From the ford the bounds follow the highway (*herpaðe*) eastwards, which is the road running in a north-easterly direction from Bathingbourne, and crossing the Arreton to Lake road, continuing towards Newchurch. This length of road also forms the parish boundary between Arreton and Newchurch. The dirty ditch (*fulan dic*) is likely to be the watercourse which flows westwards towards the Yar on the south side of Watery Lane. The bounds follow this watercourse eastwards to *wynnangeate*. This can be identified with Winford Farm, which lies immediately to the north of the 'dirty ditch' at Winford Cross. Kökeritz (1940,146) points out that "It is a noteworthy fact that *Felicia attewenforde* 1302 Ct is also called *Felicia attewingate* in the same year and in the same court-roll". The bounds then run 'along the boundary'. This is the eastwards continuation of the 'dirty ditch' beyond Winford. This ditch, which is dry in summer, formed the southern boundary of an area of heathland c.1800, and the eastern part of this boundary (before reaching the road running north from Apse Heath) consists of a double ditch. The next point in the bounds, *þa stanynan hlyfan*, is best translated as 'the stony shelter'. There are a few occurrences of *hlif* 'protection, shelter' in place-names, and one other instance in charter bounds, but apparently no other instances of 'stony shelters' (Margaret Gelling, personal communication). This shelter cannot be located in the modern landscape, but would appear to have been somewhere at the intersection of this ditch/boundary and the modern road. Similarly, 'the other stony shelter' (*þa oðre stānenan hlyfan*) cannot be located. It may have been near the crossroads at Apse Heath. From this shelter, the bounds went 'into the wide ditch forward, along the ditch to the Bathing Bourne'. This was the watercourse running from Princelett westwards to the Bathing Bourne. From this confluence, the bounds followed the stream back to 'the stony ford'.

Heantune does not exist as a modern place-name but the bounds encompass an estate which is centred on Branstone. The area has relatively subdued topography, so 'the high tun' may have referred to the highest part of this estate in the area of Branstone Cross. By 1086 the area was known as *Brandestone*, the first element of the place-name being the personal name Brandr (Mills 1996,33).

The Anglo-Saxon Landscape of Heantune

The place-name *wynnangeate* 'the meadow (or pasture) gate' refers to a gate giving access to meadow or pastureland. In c.1800, an area of heathland lay to the east of Winford. It is uncertain whether the gate here in the tenth century was giving access to heathland, or to improved pasture/meadowland. The two instances of 'stony shelters' apparently refer to man-made structures, as there are no naturally occurring rock outcrops in the area. These may have had a pastoral use, perhaps being shelters for livestock or for people tending stock. The boundary to the west of the first stony shelter was the southern limit of an area of heathland c.1800, and the second shelter would appear to have been located in the Apse Heath area, which retained an area of heathland well into the nineteenth century (Ordnance Survey six-inch map, first edition). It is quite possible that these stony shelters related to the pastoral use of this heathland, which may very well have been much more extensive in the tenth century.

The bounds of *Heantune* refer to 'the old (or main) hide formerly belonging to Winchester New Minster'. This hide cannot be located accurately, but was somewhere near the confluence of 'the wide ditch' and the Bathing Bourne. It may refer to land within *Heantune*, to land within Bathingbourne, or to land to the south of 'the wide ditch'.

Heantune and Domesday Book

By 1086 the estate was known as *Brandestone*. It was no longer held by the New Minster. Before 1066 two free men had held Borthwood, Branstone and Lessland from King Edward in freehold as two manors, and in 1086 they were held by William, son of Azor. There is a discrepancy between the two hides of *Heantune* in 982 and the 1 hide and 1 virgate of Borthwood, Branstone and Lessland in 1066/1086 (Munby 1982,53b).

The Bounds of Bathingbourne (S 842ii)

Dis synd þara twegra hida landgemæra æt Beadinga burnan: ærest on þæne stanihtan ford; of þan forða suð, andlang herpaðes, to Aðulfes hylle suð, andlang þære hina mearce, to þære widan dic west, andlang dic on þone mor norð, andlang mores for mid on Beadinga burnan andlang streames eft on þane stanihtan ford (Edwards 1866,220).

'These are the boundaries of the two hide estate at Bathingbourne. Starting at the stony ford, from the ford south along the highway to Athulf's hill south, along the monks' boundary to the wide ditch west, along the ditch to the marsh north, along the marsh onto the Bathing Bourne along the stream returning to the stony ford'.

Identifying the Bounds of Bathingbourne (Fig 4)

The bounds of Bathingbourne have been discussed by Kökeritz (1940,145-6) and commented on by Forsberg (1950,209-10).

The starting point of the bounds is the ford (now the bridge) over the stream at Bathingbourne. This is also the starting point for the bounds of *Heantune* in the same charter and of the bounds of Bathingbourne in S 1662. From this point the bounds follow the *herpaðes* (highway) southwards. This is the metalled road which runs southwards from the bridge at Bathingbourne. In the modern landscape, this road turns to the south-west after a distance of 550 metres from the bridge, by Green Acres Farm. However, the line of the *herpaðes* continues southwards as a footpath, rising over the flank of a small hill. This alignment from the ford site is also followed by the bounds of Bathingbourne in S 1663. The next point on the bounds of Bathingbourne in S 842ii is *Aðulfes hylle*, which must be this small but locally prominent hill, which is an outlier of the flanks of the southern massif composed of sandrock beds. The field-names relating to this hill in the Tithe Apportionment for Godshill parish are Great Hill, Banister's Hill, Mountains and The Hill (IWCRO JER/T/158). From *Aðulfes hyll* the bounds follow 'the monks' boundary to the wide ditch west'. The monks' boundary can be reconstructed through reference to the Godshill Tithe Apportionment. As with the southern boundary of Bathingbourne in S 1662, the southern boundary of Bathingbourne and Lessland Farms is consistent with an alignment from the hill to the area north west of Bobberstone to the 'wide ditch'. It is quite possible that the monks' boundary referred to here in the bounds of Bathingbourne is related to 'the old (or main) hide formerly belonging to Winchester New Minster' in the bounds of *Heantune* in the same charter. The *widan dic* is the watercourse running west-north-west into the stream which forms the parish boundary between Godshill and Arreton. This 'wide ditch' also formed part of the southern boundary of Lessland Farm in 1838 and is referred to in the bounds of Bathingbourne in S 1662. From this confluence, the bounds run northwards 'along the marsh', which is identified as *tidearing mor* in the bounds of Bathingbourne in S 1662. This part of the bounds follows a tributary stream of the river Yar, which forms the Godshill/Arreton parish boundary. This parish boundary and the bounds of S 842ii also follow the Bathing Bourne from the confluence with this stream as far as 'the stony ford', the starting point of these bounds. The Bathing Bourne also forms the northern boundary of S 1662 and S 1663, as well as the northern limits of Lessland Farm and Bathingbourne Farm in the Godshill Tithe Apportionment of 1838.

The Anglo-Saxon Landscape of Bathingbourne

The *herpaðes*, which runs southwards from 'the stony ford', is the southward continuation of the *herpaðes* in the bounds of *Heantune* in the same charter. The use of the word *herpaðes* implies that this was a road of more than local importance in the tenth century. There are two other instances of the use of this word in charter bounds relating to the Isle of Wight. The instance of *herpapes* in the bounds of *Linlande* (S 1662) has yet to be identified in the landscape. The bounds of Bathingbourne in S 1663 refer to *þone sandihtan hærepof* ('the sandy highway') in the Sandford area, ie. the road between Godshill to Shanklin, which is a major road in the modern landscape. The *herpaðes* which crossed 'the stony ford' at Bathingbourne and ran southwards to the Bobberstone area is a minor road and then a footpath in the modern landscape, and thus is of only local significance now. The same road was not attributed the same status however in the bounds of S 1663 where it was referred to as *þes grenan weg*, 'the green way'. The instances of *herpapes* in S 1662 (*Linlande*) and S 842 (Bathingbourne) are recorded as being aligned north to south. This may reflect the former importance of north-south routeways on the Isle of Wight within 'landscapes of colonization', providing access from the estate centres on the margins of the chalk to extensively used land within the southern vale.

The Bounds of Meolocdune (S842iii)

Dis sind þara twegra hida landgemæra to Meolcburnantune: ærest of þan fulan geate east, andlang mearce, oð æsces hege; of æsces suð andlang mearce, oð ðæt hlidegeat; of þan hlidegate on Byrhtlafes mearce west, andlang Byrhtlafes mearce oð Æþerices mearce; of Æþerices mearce norð, ofer dune, oð ðara hina mearce, andlang þara hina mearce of Ceollingwuda east; of þara hina mearce oð ðæt fulegeat (Edwards 1866,222).

'These are the boundaries of the two hide estate at Meolcburnantune. Starting from the dirty gate east, along the boundary to the ash hedge. From the ash hedge south along the boundary up to the swing gate. From the swing gate to Byrhtlaf's boundary west, along Byrhtlaf's boundary to Ætheric's boundary. From Ætheric's boundary north over the hill to the monks' boundary, along the monks' boundary to Chillingwood east. From the monks' boundary back to the dirty gate'.

Identifying the Bounds of Meolocdune (Fig 5)

The bounds of *Meolocdune* have been commented on by Kökeritz (1940,27). The estate is referred to as '*in loco qui appellatur at Meolocdune*' in the Latin proem of the charter, and as *Meolcburnantune* in the Old English bounds (Edwards 1866,218,220).

Kökeritz was unable to reconstruct the bounds of *Meolocdune*, commenting that "The survey evidently starts somewhere east of East Ashley at *þan fulan geate*, which was perhaps near the present Gate House, but *æsces hege* and *Ceollingwuda* are the only boundary-marks that can be safely identified" (1940,27). The key to the reconstruction of the bounds is the tithe-free area of Ashley Farm as depicted on the Newchurch parish Tithe Apportionment map of c.1840 (IWCRO JER/T/194). These were the demesne lands of Ashley which were later called Ashley Farm. The bounds of *Meolocdune* are consistent with the tithe-free area of Ashley Farm with the addition of a small area on the western side of the farm which was covered by a *modus*⁵, but excluding the northernmost part of Ashley Farm at the time of the Tithe Apportionment. The portion of Ashley Farm which was beyond the bounds of S 842iii consisted of the area immediately to the south of Gate House and Deacons and the area which was known as 'Woodfields alias Ashley Common' c.1800. The exclusion of Ashley Common from an estate centred on Ashley has a parallel in the spatial relationship between Ningwood Common and the bounds of Ningwood in S 543. In the case of Ashley Common, this area was within the post conquest manor of Ashley, which extended to the northern coast of the Island.

The starting point of the bounds of *Meolocdune* was *þan fulan geate*, 'the dirty gate'. This would appear to have been in the area to the south of Gate House. The evidence of the tithe free area in the Tithe Apportionment indicates that in the later Middle Ages the site of Gate House was on the northern boundary of the demesne land of Asheby. However, *þan fulan geate* would have been more appropriately located on the continuation of Gatehouse Road, which is an unmetalled track in the modern landscape. This track drops down the slope to the south of Gate House, and after 400 metres reaches a minor watercourse. 'The dirty gate' is an appropriate name for this wet, low-lying situation (which is now crossed by the reopened Havenstreet to Smallbrook railway line). From here a boundary was followed eastwards to *æsces hege* 'ash hedge' which can be identified with Asheby, now known as East Asheby Manor Farm, and as Asheby Farm in the Tithe Apportionment. The precise alignment from *þan fulan geate* to *æsces hege* cannot be reconstructed, but would appear from the bounds to have been relatively direct. The first post-conquest reference to the latter place-name is *Asseshey*, recorded in 1280. The precise derivation of Asheby is uncertain. The first place-name element would appear to have been OE *æsc* 'ash-tree', but the personal name *Æsc* is possible. The second element is probably OE *hege* 'hedge' although OE *(ge)hæg* 'hay, enclosed piece of land' is a possibility (Kökeritz 1940,25-26). In either case, the name refers to some sort of enclosure. Thus Asheby can be taken to mean 'the hedge or enclosure by the ash-tree' (Mills 1996,24). Earthworks adjoining the farm site indicate that Asheby was a focus of settlement in the Medieval period, and documentary sources imply a late fifteenth century depopulation (Beresford 1954,354). East Asheby Manor Farm and its associated earthworks are situated on the western side of the Newchurch/Brading parish boundary. From *æsces hege* almost back to the *fulan geate* the bounds of *Meolocdune* follow the limit of the tithe-free area of Asheby Farm c.1840, which south of the farm follows the parish boundary *oð ðæt hliðgeat* 'up to the swing gate'. The eastern boundary therefore follows the course of Monktonmead Brook up to its source and then along the dry valley alongside Eaglehead Copse onto the lateral chalk ridge. The 'swing gate' would have been located on the road which follows the line of this ridge. In a survey of manorial bounds of 1624 the site of *ðæt hliðgeate* was referred to as *The stile that leadeth out of Eagles hand* (Roy Brinton, personal communication). From the 'swing gate' Byrhtlaf's boundary was followed westwards to *Ætheric's* boundary. This would have been the line of the road on the southern flank of Asheby Down. From *Ætheric's* boundary, the bounds went 'north over the hill'. This change in direction is reflected in the line of the modern road, where the road following the lateral chalk ridge from Brading runs northwards for a distance of c.120 metres to meet the road from Asheby. From this point, the bounds of S 842iii appear to follow the limit of the tithe-free area in the mid nineteenth century down to the 'monks' boundary'. The 'monks' boundary' is the continuous hedgerow running in a north-north-easterly direction from a point 200 metres to the south east of Rowlands Farm. The monks' boundary would have formed the eastern boundary of Chillingwood in the tenth century. This boundary was followed until the watercourse flowing west-north-west from *þan fulan geate* was reached (ie. the upper course of Blackbridge Brook). The boundary with Chillingwood in the modern landscape is not particularly noteworthy, but its continuation towards Kempfill Farm is of more interest as the hedge contains spindle. This continuation was the pre-dissolution boundary between Kempfill (Quarr) and the manor of Asheby (Wherwell) (IWCAC photos and notes by Roy Brinton, SZ 573896: 1982). The directions given in the bounds *andlang þara hina mearce ..* are incorrect, as 'along the monks' boundary to Chillingwood east' should have read '.. to Chillingwood north'. There would also appear to be a word missing following 'Chillingwood'. *Ceollingwuda* certainly does not refer to the settlement site of Chillingwood farm, which lies 900 metres to the west of 'the monks' boundary'. It is also quite unlikely that *Ceollingwuda* refers to an area of woodland, as a location on a boundary where the alignment changes direction has to be a precise point in the landscape. It is quite probable that the Old English bounds should have actually read *andlang þara hina mearce oþ Ceollingwuda broc (or burnan) norð*, '...to Chillingwood brook north', as the stream now known as Blackbridge Brook would appear to have been referred to as Chillingwood

Brook in the bounds of *Stathe* in the same charter (Margham forthcoming). The bounds then returned to 'the dirty gate', following the line of the watercourse, which for three-quarters of this distance formed the northern limit of Asheby Farm c.1840.

The Anglo-Saxon landscape of Meolocdune

The two hides of Meolocdune consisted of the area of chalk downland now known as Asheby Down, and the area of clayland to the north of the lateral chalk ridge. This clayland area now consists of West Asheby Farm and East Asheby Manor Farm. The starting point for any reconstruction of the landscape of the area in the tenth century are the two place-names which refer to the estate in the charter, *Meolocdune* and *Meolcburnantune*. The first of the names is to be found in the Latin proem of the charter and can be interpreted as "the down where the grazing was good and consequently milk was got" (Kökeritz 1940,27) and must refer to Asheby Down. "*Meolcburnantune* is apparently the *tūn* on the *Meolcburna* (<OE *meoluc* 'milk', *burna* 'brook, stream'), ie. the river round which there were good pastures.." (ibid.). The *burna* referred to in this place-name is the upper course of Monktonmead Brook, the line of which forms the eastern boundary of Newchurch parish from its source south of Asheby Farm, northwards to the sea east of Ryde. Asheby Down was therefore an area consisting mainly of chalk grassland in the tenth century⁶. It is quite possible that this grassland was supporting sheep, which were exploited for dairy products, rather than cattle. The use of sheep for milk, cheese and butter products is well attested in Anglo-Saxon England⁷, and a document relating to the sixteenth century in Freshwater parish records the milking of ewes (Hockey 1970,56). Not all of the chalk downland of *Meolocdune* was necessarily chalk grassland. Just beyond the bounds of the estate to the east, the steep slope on the eastern side of the dry valley is at present occupied by Eaglehead Copse. When examined as part of a survey of woodlands in 1981, Eaglehead Copse was found to have a ground flora consisting of 33 ancient woodland vascular plant species (Hornby 1982). It is likely that this steep slope has had a woodland cover for several thousand years. The opposite side of the valley within the bounds of S 842 has a similarly steep slope. It is quite possible that the eastern flank of Asheby Down retained some woodland cover throughout the Anglo-Saxon period, which has subsequently been cleared. Although there is no mention of a road along the southern boundary of the estate, the reference to *ðæt hlidgeat* 'the swing gate' implies that there was a road or track here in the tenth century. It is quite likely that the line of the present road running east-west along the lateral chalk ridge from Brading and then along the southern flank of Asheby Down was a routeway at the time of the charter.

The pastoral nature of the clayland to the north of the down is also reflected in its tenth century place-name. How much of the estate north of the chalk ridge this referred to is uncertain. The name *Meolcburnantune* and the reference to *æsces heges* in the bounds imply that cattle were kept on enclosed pastures alongside the stream. Thus the immediate area around the estate centre (Asheby Farm) would appear to have had a pastoral use. It is also quite likely that some of this lower lying streamside land was enclosed meadow. *Abedestone* (Asheby) had 3 ploughlands in 1086, so some of the area to the north of the lateral ridge would have been used for arable crops in the tenth century. Two areas of ridge and furrow were recorded by the author during fieldwork (7/4/98) in the fields to the west and south-west of West Asheby Farm. Although this may very well have had a more recent origin than the tenth century, these two locations are consistent with the better drained areas just beyond the base of the chalk ridge being used for cultivation. There is very little woodland within the bounds of *Meolocdune* in the modern landscape. However, several areas of woodland existed in the West Asheby area, before woodland clearance associated with the replanning of the landscape by George Young in the 1850s. The largest of these was Inwards Copse, to the north-west of Asheby Farm (IWCRO map of 1771, J.L. Davies; personal communication, Roy Brinton). The 'monks' boundary' as it approaches the upper course of Blackbridge Brook borders Rowlands Wood. This wood was found to contain 25 ancient woodland vascular plant species in the 1981 survey (Hornby 1982). It is possible that this woodland continued over the

boundary in the past and that the area of Ashey Farm which was covered by a *modus* in the Newchurch Tithe Apportionment preserves the outline of this former woodland. There is however no reference to woodland in the bounds of the estate (unless *Ceollingwuda* refers to the area of woodland now known as Rowlands Wood, rather than the watercourse now known as Blackbridge Brook, which is unlikely), but this may not be significant. The map of the Isle of Wight produced by Thomas Milne in 1781 names a settlement site just to the east of Ashey Farm over the Brading parish boundary as Broadlee (Hampshire CRO facsimile). The recording of the place-name is late, but this may refer to a much earlier place-name with a *-leah* suffix, indicating a significant area of woodland or wood-pasture in the vicinity of Ashey Farm. Nearby Broadley Copse is named on the modern 1:25,000 map (1996). The area of Ashey Common is of interest, even though it was beyond the bounds of S 842iii. In the modern landscape some of the area to the north of Deacons Lane has a number of mature oak trees giving a parkland appearance to this pasture field. These isolated trees are indicated to be more numerous on the first edition of the Ordnance Survey six-inch map of the 1860s. The existence of these trees suggests an area of former wood-pasture. Within the bounds of the two hide estate of S 842iii, there is a similar area indicated on the first edition of the six-inch map. This is to the west of West Ashey Farm, in a shallow valley between the two areas of ridge and furrow referred to above. This was the area of Long Phillis Coppice, marked on the 1771 estate map (IWCRO, J.L. Davies survey), which was one of the areas of woodland which existed in this area, predating George Young's landscaping which included the construction of West Ashey Farm in 1859 (Roy Brinton, personal communication). Wood-pasture is attested for other areas within the northern lowlands of the Island and it is quite likely that these areas of woodland around Ashey shown on eighteenth and nineteenth century maps represents an area of wood-pasture in the later Anglo-Saxon landscape. The lowest-lying area of the two hides of *Meolocdune* is the area along the upper course of Blackbridge Brook. This was the probable location of *þan fulan geate*. A wetland environment can be envisaged for this area. On the clayland soils between the arable area to the north of Ashey Down and the low-lying area alongside this stream, an environment of wet heathland with wood-pasture can perhaps be envisaged, providing extensive pasture for *Meolcburnantune*. The estate survey of 1771 implies that Ashey Common was much more extensive at some time prior to this date, extending over the area to the south-east of Gatehouse and Deacons, up to Ashey Farm. Much of this area would have been within the bounds of S 842. This interpretation is supported by the presence of isolated and small clumps of oak trees within the present-day fields, which appear to have no connection with former field boundaries. Ashey Farm would have been at the southern apex of this extensive area of 'common'.

On the summit of, and on the southern flank of the lateral chalk ridge, the bounds of *Meolocdune* refer to *Byrhtlafes mearce* and *Æperices mearce*. These two personal names would appear to relate to contemporary or former landowners in the area to the south of the ridge, whose properties abutted *Meolocdune*. Both of these individuals presumably held land in the Knighton area. Although Knighton has two entries in Domesday, the land tenure here in the time of King Edward was very fragmented (Munby 1982,39c,54a), so Byrhtlaf and Æperic and their properties can not be related to Domesday Book. To the west of the two hides of *Meolocdune* lay Chillingwood. The reference to *hina mearce* in the bounds indicates that Chillingwood belonged to a monastic church in 982.

Both *Meolocdune* and *Meolcburnantune* may relate to components of an earlier much more extensive estate which had become fragmented by the tenth century. The name *Meolcburnantune* may be seen as a parallel for Wootton (*wudu + tun*), ie. an economically specialized *tun* within a much larger estate with its caput elsewhere. Where such an estate centre would have been located in this part of the Isle of Wight is uncertain. Chillingwood is a possibility (an *-ing* place-name)⁸, but a location on the margins of the lateral ridge is more likely. Arreton, which features in King Alfred's will (S 1507) is a distinct possibility as a centre of an extensive 'multiple estate' in the eastern central part of the Island.

Meolocdune and Domesday Book

The estate of two hides is referred to as *Meolocdune* and *Meolcburnantune* in S 842iii. These names were not recorded in the Domesday survey. It is almost certain that the area was known as *Abedestone* in 1086. As Kökeritz has pointed out, "... its identification with *Meolcburnantune* and modern Asheby gives a plausible explanation of the fact that neither occurs in DB" (Kökeritz 1940,27). 'The abbot's *tūn*' would be an appropriate name for land which formerly belonged to the New Minster (ibid.,26). A parallel for this name is Abbotstone in Whiteparish (Wiltshire). This area was within the bounds of the three hides of Frustfield, which was confirmed as being in the possession of the abbey of Wilton in 968, along with Watchingwell and other properties (S 766). Its name is derived from its association with the abbess of Wilton (Finberg 1964,97). There is however a discrepancy between the two hides of *Meolcburnantune* in 982 and the one hide of *Abedestone* at Domesday. By 1066 an estate of one hide was held from King Edward in freehold at *Abedestone* (Munby 1982,39c).

The bounds of Stathe (S 842iv)⁹

Dis synd þara anre hida landgemæra æt Stæðe: ærest up of wareðe to þan stane æt þan geate; of þan geate suð, andlang mearce, on þara hina mearce, on Ticcanfelda; ðonne gyt suð, andlang mearce, to þan stane þe stænt æt bennan hamme; þanon east, andlang mearce, on þone heal; of þan heal suð, andlang mearce, to Hwatewisc; of Hwatewisce west on Ceolling burnan, andlang streames west, to ðæne widan dic norð; andlang dic, up on þæt geat; of þan geate, swa hit gemearcod is, on þone broc; andlang broces to fugel fleote; of þam fleote ut on sæ (Edwards 1866, 220).

'These are the boundaries of the one hide estate at Stathe. First up from the shore to the stone at the gate. From the gate south along the boundary, to the monks' boundary of Titchfield. Then still south along the boundary to the stone that stands at Benna's [river] meadow. Then east along the boundary to the nook. From the nook south, along the boundary to the wheat marshy meadow. From the wheat marshy meadow west to Chillingwood Brook, along the stream west to the wide ditch north, along the ditch up to the gate. From the gate as it is marked out to the brook, along the brook to the bird fleet. From the fleet out to sea'.

***Identifying the Bounds of Stathe* (Fig 6)**

It has been suggested that the estate of *Stathe* was coterminous with Binstead parish (Hockey 1982,8). This can be discounted, as the bounds of *Stathe* do not accord with features along Binstead's eastern boundary, which follows the course of Binstead Brook. There is no mention of this stream in the eastern bounds of *Stathe*, which consisted of a *mearce* 'boundary', probably an earthwork or hedge-bank. The bounds of *Stathe* have been plotted and discussed in a recent study (Margham, forthcoming). This identification of the bounds is summarised here.

The starting point of the bounds is the coast, '.. up from the shore'. The boundary running along the eastern side of Fishbourne Copse, then southwards through the site of Quarr Abbey, is compatible with other topographical evidence (below). '.. the stone at the gate' would appear to have been in a location to the south of the abbey site, on the Wootton to Binstead road. From this location, the boundary running south south-westwards is indicated on the six inch map survey of c. 1800 and on later maps, ie. 'south along the boundary'. The 'monks' boundary' of Titchfield is likely to have been the western boundary of Newnham Farm as indicated on the Binstead tithing apportionment map of 1848 (IWCRO JER/T/31A/1,2). A location on the south-eastern side of Firestone Copse on the boundary of Newnham Farm is suggested for the 'stone that stands at Benna's hamme', alongside the small stream that flows westwards into Blackbridge Brook. 'The nook' appears to have been the western side of the hill to the north of Coppidhall Farm. A location

in the vicinity of Pondcast Farm, to the south of Havenstreet, is consistent with the 'wheat marshy meadow'. The next reference is to Chillingwood Brook where the stream was followed westwards. It would appear that the stream now known as Blackbridge Brook was known as Chillingwood Brook in the tenth century. This observation is supported by an interpretation of the bounds of *Meolcburnantune* in the same charter (above). The 'wide ditch' may have been the ditch which is marked on the Ordnance Survey six-inch map of the 1860s which runs to the east of, and parallel to, the lower course of Blackbridge Brook. The point within Firestone Copse where five tracks meet is a possibility for 'the gate'. The brook referred to next is either Blackbridge Brook just before it joins Wootton Creek, or the small stream which flows westwards into the top of the creek. 'The bird fleet' must be Wootton Creek, from whence the bounds were followed out to sea.

The Anglo-Saxon Landscape of Stathe ¹⁰

Half the landward bounds of *Stathe* as reconstructed above consisted of *mearce* ('boundary'). The presence of such a length of earthwork boundaries implies that a substantial part of the area was open, rather than having a dense woodland cover, at least on one side of the boundary. It is likely that much of this open landscape was heathland, consisting of wet heath on the lower-lying clay soils and dry heath on the hill-top areas of gravel. Heathland on clay soils is now extinct in this part of the Island, but place-names and field-names attest to its former importance. Meadow would have formed another type of open landscape in the tenth century, but one which was much less extensive than heathland. This is mentioned in the bounds of *Stathe* as *bennan hamme* ('Benna's [river] meadow') and *Hwatewisce* ('wheat marshy meadow'). The third, and probably least extensive, type of open landscape in the later tenth century would have been arable land. The presence of some arable is implied in the reference to *Hwatewisce*, suggesting a wet, low-lying area where wheat had been planted.

Woodland is not mentioned specifically in the bounds of *Stathe* but may be referred to in the area to the south-east of Wootton Creek (*fugel fleote*) where the bounds run from the *gate swa hit gemearcod* is ('as it is marked out') to the brook. The use of this term in preference to *mearce* may be significant, perhaps indicating a landscape which was not open. This part of the bounds is within the present area of Firestone Copse, which is one of five areas of woodland on the Island having more than 50 ancient woodland vascular plant species (Hornby 1982). Firestone Copse also contains Wild Service-tree, another indicator of ancient woodland (Bevis et al. 1978,50). Woodland here in the tenth century may however have had a more open aspect than in the modern landscape, being an area of wood-pasture.

Stathe and Domesday Book

The place-name *Stathe* does not appear in Domesday Book and there were no other manorial centres which can be located in the immediate area. The place-name Fishbourne was not recorded until 1262 (Mills 1996,49). The estate of *Stathe* would therefore appear to have been administered from elsewhere in 1086. The most likely explanation is that it would have been included in the 32 hides of Calbourne (Swainstone), the bishop of Winchester's estate. The connection between *Stathe* and the church at Winchester originated with Æthelmær's bequest in 982 (S 842).

S 1391, Wroxall

This charter dates from 1043x1044 and records an exchange between Bishop Ælfwine, Bishop of Winchester and Osgod, involving Adderbury (Oxfordshire) and *Wroccesheale* (Wroxall).

"Here is stated in this document the agreement which Bishop Ælfwine and the community at the Old Minster made with Osgod when they let him the estate at Adderbury ¹¹ in return for the estate which he held at Wroxall in the Isle of Wight, namely that Osgod should enjoy the estate at Adderbury during his lifetime, and that after his death it should return to the Old Minster with its pro-

duce and its men and everything as it stands, just as it was when they let it to him" (Robertson 1956, XCVIII).

The hidage of the Wroxall estate is not given in the charter. The document was witnessed by King Edward, which would explain the statement in the Annals of Winchester that King Edward gave the minster five hides at *Wroccshele* (Luard 1865,25; Finberg 1964,159). *Warochesselle* paid geld for five hides in 1066 (Munby 1982,39d) ¹².

Reconstructing the Bounds of Wroxall (Fig 7)

There are no Old English bounds for Wroxall, the charter documenting the exchange of the two estates did not include boundary clauses. Wroxall was held by the Redvers family through the twelfth century and grants from this estate are well documented. This, in conjunction with other documentary sources and features in the landscape allow a reconstruction of the five hides of Wroxall in the mid eleventh century.

By 1086 Wroxall was held directly by King William and was later granted to the Redvers family. This grant presumably formed part of Henry I's grant to Richard de Redvers of the whole of the Isle of Wight in 1100. The Redvers certainly had lands in the area soon after 1100, for a gift by Richard de Redvers to Montebourg abbey included *et terram in insula de Wit nomine Sanfort* [ie. Sandford], 1100x1107 (Bearman 1994,2).

The grants made by the Redvers from Wroxall in the twelfth century can be listed in chronological order:

1. Earl Richard de Redvers 'made a partition' and gave 20 shillings of land in Wroxall to Quarr in 1155x1160. This can be identified with the Yard Farm area just to the south of Winstone (Hockey 1991,no.434).
2. In 1180x1186 a confirmation was made of a gift by Kenebald the minstrel of three properties on the Isle of Wight to Christchurch Priory. These properties included four solidates ¹³ of land in Wroxall. The properties also included the land of Winstone, implying that Winstone was not regarded as being part of Wroxall. The land had been given to Kenebald by Earl Baldwin I and this had been confirmed by Earl Richard I (Bearman 1994,no.55).
3. Richard de Redvers (Earl Richard II) made a gift of a marcate ¹⁴ in his manor of Wroxall to Quarr Abbey, 1188x1189 (Bearman 1994,no.63; Hockey 1991,no.453).
4. Richard de Redvers also made a gift of 100 solidates of land in his manor of Wroxall to Motebourg Abbey, 1188x1189 (Bearman 1994,no.65). This substantial area of land was probably situated on the western side of the valley in the Appuldurcombe area.

A picture is beginning to emerge of a substantial estate consisting of land on both sides of the upper course of the stream which was referred to further north as the Bathing Bourne in S 1662 and S 842ii and which also forms the Godshill/Newchurch parish boundary. The eleventh century estate of Wroxall was not confined to the area around Wroxall Manor Farm and the present-day village of Wroxall. The Span area, to the west of the stream, had at one time belonged to the de Aula family (Page 1912,174), but it is likely to have been part of the Wroxall estate before this.

The following reconstruction of the bounds of S 1391 follows the Old English convention of describing the bounds of an estate in a clockwise fashion. The starting point for this reconstruction is the south-western corner of the estate, on the south coast of the Island.

The western boundary of S 1391 would appear to have been to the west of the Godshill/Newchurch parish boundary. The start of this boundary may have coincided with the St Lawrence/Godshill parish boundary in the Undercliff area, then following this boundary westwards along the cliff top. This would include the Steephill area of the Undercliff within the Wroxall estate. The St Lawrence parish boundary then runs in a northerly direction up onto Week Down following the green lane on the eastern side of a coombe. The lane continues along the top of Week Down onto

Stenbury Down. This forms a topographical divide with the Domesday manor of Stenbury on the western side of the ridge and the Rew and Span Farm areas on the eastern side. The western boundary of Wroxall would then appear to have followed the ridge northwards from Stenbury Down and along the western pale of Appuldurcombe Park before the extension of the park to the west during the early 1770s. There is cartographical evidence for this extension. The map of the Isle of Wight by Isaac Taylor of 1757 shows the pale of the park before this extension and on the Appuldurcombe estate map of 1773 partially erased markings indicate the former western pale (Hampshire CRO facsimile; Basford 1989,37). This former western boundary of Appuldurcombe Park followed the line of the ridge to the top of Gat Cliff. The bounds would then have descended Gat Cliff in a north-north-easterly direction, to below the disused chalk quarry.

The north-western boundary of the Wroxall estate would appear have been the line of the southern boundary of Bathingbourne in S 1663, which coincides with the pale of Appuldurcombe Park. This boundary would also have formed the southern boundary of the Domesday manor of Sandford with Week. The boundary of Wroxall would have followed the bounds of S 1663 in a north-easterly direction probably to the eastern end of the sunken way or boundary ditch at SZ 546812 on the western side of the stream/parish boundary between Godshill and Newchurch. The boundary of Wroxall would have crossed the stream at the site of the modern footbridge. The bounds would have continued eastwards and perhaps followed the sunken track to the present-day B3327 (Ventnor to Whiteley Bank road), or alternatively followed the next field boundary to the south, which was the northern boundary of Yard Farm in 1851 (IWCAC, Appuldurcombe estate sale map).

From the road the boundary of Wroxall continued eastwards, following the northern boundary of Yard Farm as defined in 1851, with Winstone Farm to the north. Upslope of the now disused railway line, this boundary follows a deep sunken way for a distance of 100 metres. From the top of the sunken way the bounds of Wroxall followed the Yard Farm boundary up to the point on the northern flank of St Martins Down where six footpaths meet (SZ 558805). This point is actually within an area of land projecting from the land of Apse manor as mapped in 1851. It would appear that this small area of Apse manor had been transferred from Wroxall to Apse. From the point where the paths meet, the sunken way running up the slope in an east-south-easterly direction would appear to have formed the northern boundary of Wroxall. From the top of this sunken way the northern boundary of Wroxall as mapped in 1851 followed the break in slope/cliff top eastwards along the northern flank of St Martins Down. To the north and downslope lay Apse manor, which can be identified with the Domesday manor of *Abla* (Mills 1996,23). This manorial boundary is followed until the eastern boundary of Newchurch parish is reached. The continuation of this cliff top eastwards forms the Brading/Shanklin parish boundary.

From this point the bounds of Wroxall run south-south-east up onto Shanklin Down. To the east were the two Domesday estates of Shanklin. This boundary is also part of the western boundary of the reconstructed *parochia* of Brading (Margham 2000,fig 1). The boundary of Wroxall continues along Shanklin Down and then follows the Newchurch/Bonchurch parish boundary along the ridge of Luccombe Down. Although Bonchurch had been held from Earl Godwin before 1066 as had Wroxall, it was a separate manor in the Domesday survey. It is quite likely that the bounds of the estate of Wroxall followed the line of the Newchurch/Bonchurch parish boundary down the steep slope of Bonchurch Down and through the Undercliff area to the English Channel.

This reconstruction of the five hides of Wroxall in the mid- eleventh century defines an area bounded by ridges of chalk downland on both the west and the east sides. This area was centred on the site of Wroxall Manor Farm within the chalk downland and the valley running northwards from the Rew Farm area. The northern flank of St Martins Down also formed a strong topographical divide. The reconstruction also includes part of The Undercliff, ie. the areas of Steephill, Ventnor Farm and Littletown Farm, as mapped in 1729 (Whitehead 1911, maps facing pp.114,162,164). The area of The Undercliff was relatively isolated from the rest of the Island, but

was accessible from Wroxall via the line of the present B3327. Ventnor and Littletown Farms originated as portions of the manor of *Holloway*. "The farm *Holloway* was high up on the hill-slope near or in the pass between Rew Down and St Boniface Down, and this situation is expressed by the name, which means 'the hollow road' or 'the road in the hollow' (OE *holh* and *weg*)" (Kökeritz 1940,232). The former manorial name of this area was therefore derived through reference to the road from Wroxall.

Charter Bounds and Anglo-Saxon Landscapes

This and a previous paper (Margham 2006) have discussed the Anglo-Saxon charter bounds of the Isle of Wight. There are a total of ten sets of charter bounds which relate to estates on the Island (excluding *Linlande*), describing 84 separate locations, not including references to the sea. Charter bounds provide an invaluable contemporary description of landscape features from the Anglo-Saxon period, with those defining estates on the Isle of Wight all dating from the second half of the tenth century (with the possible exception of S 274). As charter boundary clauses describe features around the periphery of estates, they give very little information about the landscape of the interior of estates. Such information can be inferred from some of the names of estates, and this is also true for estates for which there are no boundary clauses. Such place-names will usually have been formed before the date of the charter in which they are recorded, but within the Anglo-Saxon period.

The landscapes of individual charters have already been discussed. Here, these will be related to the wider landscape of the Isle of Wight (Fig 8). This can be reconstructed for the medieval period using a wide variety of sources¹⁵. The landscape regions of the Island have been defined by Margham (2003) which provides a more detailed account than that summarized here:

The Northern Lowlands

This region encompasses the whole of the northern part of the Island with the southern limit being defined by the 76-metre (250 ft) contour. Much of the region overlies Oligocene geological formations that provide clayey, seasonally waterlogged soils. In the West Wight there are extensive areas of more easily worked soils derived from the underlying Eocene beds (Jarvis et al. 1984). A mosaic of land use can be reconstructed for the Northern Lowlands in the medieval period, the most extensive being woodland, wood-pasture and wet heathland. Most of the Island's ancient woodland is to be found in the Northern Lowlands. The assarting of woodland undoubtedly took place in the medieval period. This process may very well have been documented in the name for Ningwood recorded in 1086, *Lemincode*, *Le* being the French definite article, *-ode* a common rendering of OE *wudu*, and *-nimc-* standing for OE *niming* 'taking', referring to land taken into cultivation or enclosed (Kökeritz 1940,211). A substantial area of medieval woodland was probably the more open habitat known as wood-pasture, a form of dual land use with an area of land supporting trees, which were usually pollarded, and pasture, consisting of grassland or heather, for the grazing of animals (Rackham 1986,121). It was in wood-pasture areas that parks for the nurturing of deer for hunting were established after the Norman Conquest. Of the nine deer parks mapped by Basford (1989,15) six were within the Northern Lowlands, to which can be added three more possibilities¹⁶. Substantial areas of wet heathland formerly existed within the Northern Lowlands, centred on Parkhurst Forest (which also consisted of wood-pasture) and the Wootton Common area (Chatters 1984,6). Meadow and arable formed smaller but economically significant areas. Arable land use was most developed in the West Wight, particularly in the Freshwater Isle area and the light soils derived from Bembridge limestone of the Thorley/Wellow area. The latter and the areas of plateau and marine gravels adjoining the northern coast have been identified as significant sub-areas within the region. The significance of these areas of gravel became apparent with the plotting of settlement names, in particular *-tūn* names which are clustered around their margins.

These gravel 'islands' had a vegetation of dry heath, small areas of which survive in the modern landscape.

The Lateral Ridge

The Lateral Ridge is aligned east to west, forming the Island's most significant topographical divide, and is punctuated by three major gaps. It consists mainly of chalk downland but includes the subsidiary upper greensand ridge to the south of the chalk. The 76-metre (250 ft) contour has been taken to define the ridge. The term Lateral Ridge is something of a misnomer in the area to the west of the Medina gap as the band of chalk is much wider here, forming a dissected plateau. The main land use over at least the past millennium was unenclosed chalk grassland, maintained by the pasturing of sheep, which is well documented in various medieval sources (Hockey 1970;1991). The Lateral Ridge was also the location of three distinctive types of heathland habitat, which exist in small areas in the modern landscape, but were formerly more extensive: chalk heath, and heathland on gravel deposits on chalk and on the upper greensand ridge. Woodland may have formed a more significant part of the landscape in the medieval period, hinted at by the former name of Arretton Down, *Berdune*, and the lost place-name of *Codibear* on the eastern flank of the Medina gap. Both of these names may relate to swine pasture (Kökeritz 1940,7,178).

The Southern Vale

The Southern Vale is a predominantly low-lying area between the Lateral Ridge and the Southern Massif. Much of this landscape region lies below the 76-metre (250 ft) contour, although locally prominent ridges and hills are present. The area is underlain mainly by lower greensand that has produced coarse loam soils. Wealden beds are exposed along the south-western coast with a smaller area on the east coast. The soils here are heavier. There are various areas of superficial deposits, with gravel terraces associated with the eastern Yar. The only extensive area of gravel terrace has been mapped as an area of particular significance as these well-drained soils have provided a focus for early place-names. Arable agriculture is the most significant component in the modern landscape and was certainly important in earlier times, being well documented in Domesday Book and other medieval and early post-medieval sources. It can also be inferred from surviving field patterns suggesting the former existence of open fields in some areas. Apse Heath is a modern place-name indicating the former significance of dry heathland on greensand soils, this land use being an important component of the medieval landscape. In 1522, for example, the third manor of Hyde contained 40 acres of arable, 25 acres of pasture, 10 acres of arable, and 100 acres of fern and brush (IWCRO F.F.). Very little woodland of any significance was recorded for this region in Domesday Book and later manorial records enumerate only small areas of woodland. There was however sufficient woodland in the Kingston area in 1441 to create a deer park, when a license was granted to empark 300 acres of woodland and pasture in the parishes of Kingston and Shorwell (Basford 1989,16). Small areas of wet woodland alongside watercourses such as those in the modern landscape had an economic importance in the medieval period, as would more open habitats in similar locations. The more open habitat of wet pasture and meadow would have been more extensive in the Anglo-Saxon landscape. The manor of Gatcombe adjoining the Medina valley, for example, had 26 acres of meadowland in 1086 (Munby 1982,52d). The six-inch scale drawings for the first Ordnance Survey mapping of the Isle of Wight, which was commenced in 1793, also indicate the continued existence of wet pasture and meadow alongside watercourses throughout much of the Southern Vale at this latter date. Such areas were often referred to as 'moors' (Hockey 1970,71), whereas the area to the south-east of Brading Haven is referred to as marsh in various medieval documents. Meadow would also have been located alongside the headwaters of streams that drain the Wealden beds along the south-west coast entering the sea via features known locally as chines.

The Southern Massif

To the south of the Southern Vale lies the chalk downland of the Southern Massif. The 76-metre (250 ft) contour has been taken to define the limits of this landscape region. Much of the surface geology consists of chalk, but some of the underlying upper greensand and gault form its northern margins, with the solid geology obscured on the steeper slopes by areas of landslip. The Southern Massif is drained northwards by streams which have formed long, narrow valleys, with the upper parts of the valleys being dry. The land use of the Southern Massif is not well documented until the sixteenth century, when the unenclosed nature of the landscape provided plenty of opportunity for disputes over the grazing of sheep on St Catherine's Down (Hockey 1982,212-3). A much earlier record of land use on the Southern Massif is provided by the name St Martins Down, a corruption of *Smerdone* first recorded c. 1240. This means "the hill or down where butter is produced' (ie. with rich pasture)" (Mills 1996,91). *Smerdone* may very well refer to the production of sheep milk, and provides a parallel for *Meolocdune* (Ashey Down) on the Lateral Ridge recorded in 982 (S 842iii). Chalk grassland grazing would have been complemented by the rougher grazing provided by heathland on gravel deposits, an area of which exists in the modern landscape on the summit of St Boniface Down. Woodland today is largely restricted to small areas on steep slopes. The evidence of Domesday Book suggests that only small areas of woodland existed in the medieval period, so a similar pattern of woodland distribution is quite likely. There is evidence to suggest that one of the more low-lying areas on the margins of the Southern Massif did have an area of wood-pasture¹⁷. Parkland established at Appuldurcombe in the sixteenth century appears to have included an area of ancient woodland. Other types of landscape in the medieval period would also have been restricted to the margins of the Southern Massif. Examples of these are the open fields of Niton and Whitwell, and the two Domesday manors which included areas of meadowland (Margham 2003,24).

The Undercliff

The most southerly landscape region of the Isle of Wight is that known locally as 'The Undercliff', being bounded to the north for much of its length by an inland cliff. It is a well-defined region, which before the development of modern communications was relatively isolated from the rest of the Island. The Undercliff has a well-documented history of landslips. The soils are moderately easy to cultivate but the agricultural potential of The Undercliff has always been restricted by the very broken nature of the ground. Some arable land use was attested by Domesday Book, but The Undercliff remained a region with a largely extensive pattern of land use until residential development in the nineteenth century. Speed's map of the Isle of Wight, dating from 1611, labels The Undercliff as 'St Laurence Park', but Basford (1989,14) points out that no park pale is shown on Speed's map and that the inland cliff would have formed an effective barrier. Botanical evidence from the late eighteenth and early nineteenth century suggests that The Undercliff remained essentially an open, rocky rough grazed landscape with groups of trees forming very small wooded areas (Colin Pope, personal communication).

Landscape Regions and Charter Bounds

Table 1 categorizes all the features in the ten sets of boundary clauses, a total of 91 locations (excluding *Linlande*). Six of these locations appear in two categories, such as 'the wheat marshy meadow' (S 842iv), which appears under 'marshes and moors' and 'hedgerows, pasture and meadows'. Some of the boundary markers are duplicated, for example the bounds of S 274 and S 1581 (Calbourne) are almost identical. Such instances have only been counted once, with two or more references given in Table 1 to a single feature in the landscape. An example of this is 'the stony ford' at Bathingbourne, which is mentioned in three sets of charter bounds. When references to the sea and the shore are deleted and all of the above taken into account, there is a total of 84 separate

locations. The amount of information that can be provided about each landscape region is uneven, due to the degree of definition in various boundary clauses and the survival of only ten clauses, when presumably many more once existed. Thus there were 40 separate locations in the Northern Lowlands, 9 on the Lateral Ridge, 33 in the Southern Vale and 2 on the Southern Massif. Locations within The Undercliff are not mentioned, although the reconstruction of the bounds of Wroxall (S 1391), which has no extant boundary clause, does include part of this region.

Coastal features: With the indented nature of the Island's northern coast, coastal features were mainly recorded on the margins of the Northern Lowlands, where post-glacial sea level rise has formed estuaries. Such coastal features may have had an economic importance in the later Anglo-Saxon period. It is possible that *fugal fleote* 'bird fleet' in S 842iv (ie. Wootton Creek) was used for the taking of birds for food. The two instances of features recorded on the Island's south-west coast represent the use of chines as boundary markers, where such features also formed medieval parish boundaries.

Valleys and watercourses: Mentions of valleys and watercourses were likewise restricted to the two major lowland landscape regions. The preponderance of these was recorded in the Bathingbourne and Branstone areas, with four boundary clauses surviving for a relatively low-lying area. The minor watercourses, the ditches and streams of this area in the valley of the eastern Yar can be contrasted with the slightly more undulating topography of the Northern Lowlands where boundaries associated with minor watercourses were mainly referred to as slades and brooks. The term *bourne* was used of larger streams in both of these landscape regions.

Marshes and moors: Moors were associated with slades in the Northern Lowlands and with the watercourses of the Bathingbourne area within the Southern Vale. They were therefore wet, low lying areas such as Tidheard's moor (S 1662), now an area of rough pasture, which was later known as *Ryde Mede* (Hockey 1991, map 4). Some of these areas were probably used as meadows, '... the "moors" of the Isle of Wight are flat, low-lying areas bounded by watercourses, capable of producing a heavy cut of grass' (Hockey 1970,71), whereas others were predominantly rough pasture, which can be inferred from the Ordnance Survey maps of 1793 onwards.

Hedgerows, pasture and meadows: Hedgerows were a feature of both the Northern Lowlands and the Southern Vale, providing evidence for the enclosed nature of at least some of these two landscape regions. The *hamme* '[river] meadow' in S 842iv would appear to have had a similar function to the moors referred to above, whereas 'the wheat marshy meadow', also in the *Stathe* area, was surely an unsuitable place in which to grow grain. It has been argued that the one reference to meadow or pasture (*wynnangeate*) within the Southern Vale may refer to an area of heathland (S 842i). There are two possible references to wood-pasture in the charter bounds of Watchingwell (S 766), both containing the term *lege/leage*, a term derived from OE *lēah*¹⁸. The first of these is within the Northern Lowlands (*heort lege*) where wood-pasture is known to have been extensive. The name of the estate *hwætincg le* in the same charter, where the element *le* is an abbreviation of *lēah*, would also appear to be associated with wood-pasture in this landscape region¹⁹. The other instance of possible wood-pasture in S 766 was further south, within the Lateral Ridge. It may be that *leage* here does refer to chalk grassland, complementing the use of woodland of grove proportions on the chalk such as that recorded in the nearby place-name of Ashengrove (*æscstede* in S 274,766 and 1581). However, possible parallels for wood-pasture on chalk can be found in the medieval name of Arreton Down, *Berdune*, and the lost place-name of *Codibear* on the eastern flank of the Medina gap, as both may contain the OE place-name element *bær* '(swine) pasture' (Kökeritz 1940,7,178).

Roads, lanes and gates: A variety of terms are used in the boundary clauses of charters which reflect the status of roadways in the later tenth century. The two instances of lane are to be found in the Northern Lowlands, one of which remains a lane in the modern landscape. The term *herþaðes* 'highway', recorded three times in the Southern Vale, implies a route of more than local importance. 'The sandy highway' of S 1663 now forms the main road from Godshill to Shanklin

in the modern landscape at Sandford. *Heantune* was bounded to the north-west by a *herþaðes* (S 842i). This route continued southwards bounding the Bathingbourne estate (S 842ii) where it was also referred to as a highway. It was however considered of less importance as *þæs grenan weges*, ‘the green way’, in S 1663. This difference in status may be explained through reference to the modern landscape, where the road southwards from the bridge at Bathingbourne, formerly ‘the stony ford’, turns to the south-west after c. 550 metres, with the line of the road from the bridge continuing southwards as a footpath. The various references to gates in the charter bounds may have been associated with control of pasturing animals, within wood-pasture, heathland or on chalk downland.

Other linear boundary features: The term *mearce* ‘boundary’ referred to within the Northern Lowlands, Lateral Ridge and Southern Vale implies the existence of a landscape which was not heavily wooded, at least on one side of the boundary. The term ‘as it is marked out’ occurs in both of the two major lowland landscape regions. That in the bounds of Stathe (S 842iv) would appear to refer to an area which is now ancient woodland (Firestone Copse) which may have been wood-pasture in the tenth century, i.e. a more open environment. A similar interpretation is however unlikely to be valid for a low-lying area on the bounds of *Heantune* (S 842i).

Hills: A variety of different terms for ‘hill’ are used in the charter bounds, which are dependent on the form of the hill. In the Northern Lowlands, *hyrste* ‘wooded hillock’ accords well with the gentle topography of Park Hills (S 543) whereas the more pronounced form of Bunts Hill was described as *beorh* (S 766). On the Lateral Ridge the only reference in the bounds is *dune* but *Meolocdune* is the name of the estate, indicating the pastoral nature of this downland (S 842iii). Within the Southern Vale, *Aðulfes hyll* describes the gentle, rounded topography of this location (S 842ii) whereas *stan beorg* indicates a prominent hill within the Southern Massif (S 1663).

Stones, trees, pits and ponds: All of the stones forming boundary markers must refer to stones that have been erected, as prominent, naturally occurring boulders are absent from both the Northern Lowlands and Southern Vale. This is also true for the two instances of stony shelters in the Branstone area. It has been argued that these may be shelters erected having some connection with pastoral land use (above). The *lim pyt* (S 766) records one of the many now disused chalk pits in the modern landscape on the flanks of the Lateral Ridge. The tree referred to in the same charter (*ge clyppedan treowa*) may possibly be a feature in an area of wood-pasture within the Northern Lowlands²⁰.

Woodland: Evidence for wood-pasture has been discussed above. The boundary features listed here all refer to woodland rather than this more open landscape. *Hyrste* in S 543 is best translated as ‘wooded hillock’ (Hooke 1998,149) and can be related to the four instances of *hyrst* place-names within the Northern Lowlands in similar situations, implying relatively small areas of woodland. Chillingwood is also within this landscape region and is an area of ancient woodland in the modern landscape, and must represent a more extensive area of woodland. ‘The place of the ash trees’ (*æscstede*) suggests a small area of woodland on the flanks of the Lateral Ridge, similar to that which exists in the modern landscape here.

Other topographical features: Wullaf’s leap may refer to a deer leap, and if so may be evidence for an Anglo-Saxon precursor to a medieval deer park in the Shalfleet area (Margham 2006,81). The two instances of ‘moot mound/hill’ represent contrasting locations, Bunts Hill (S 766) a locally prominent hill within the Northern Lowlands, and the other, Gallibury Hump (S 274), a bronze age round barrow in a prominent position up on the Lateral Ridge. Whilst the forms of these two features are very different, their functions as meeting places within the Anglo-Saxon period were similar. Swines head (S 274,1581) cannot be identified with any certainty. It may represent a stream in the Southern Vale or a topographical feature on the Lateral Ridge.

Negative evidence: So far, the evidence assessed above has been concerned with what the boundary clauses of charters tell us about the later Anglo-Saxon landscape. What they do not tell us is also important. Two significant instances can be cited. Firstly, there are no references to

woodland on the boundaries of estates within the Southern Vale, where reconstruction of the landscape region suggests only limited, localized stands of woodland in the medieval period. Secondly, although there is a reference to some rather poor arable land on the boundaries of one estate (S 842iv), none of the boundary clauses mention open field furlongs. It can be inferred that, although open fields may very well have been established within some estates by the later tenth century, it would have been restricted to the core of such estates. This observation is compatible with what is known about open field agriculture on the Isle of Wight from later sources. Field systems were well documented for some areas, but the extent of open field agriculture was generally restricted.

Conclusions

The boundary clauses of Anglo-Saxon charters provide invaluable information about the landscape of the Isle of Wight in the tenth century. All the information that can be gleaned about the later Anglo-Saxon landscape is compatible with information from the medieval and later sources that were used to define the five landscape regions of the Island. After the Anglo-Saxon period, our next source of information is Domesday Book of 1086. This provides broad information about the landscape, but is not too specific as to locations. For example, the 26 acres of meadowland, which formed part of the assets of the manor of Gatcombe referred to above, were probably situated alongside the river Medina, but this is an assumption. The identification of landscape components in Domesday Book is even more problematic when we are dealing with larger estates. Relatively large amounts of arable and woodland were recorded for the bishop of Winchester's estate of Calbourne, which encompassed three landscape regions. It is only through reference to later sources that we can infer that much of the woodland was located within the Northern Lowlands and that most of the arable was just to the north and south of the Lateral Ridge. With the boundary clauses of Anglo-Saxon land charters we can be much more specific than this, enabling the precise identification of boundary features which were of great importance to people in the tenth century and which in many instances exist in the modern landscape.

Abbreviations

CRO County Records Office

ECW Finberg (1964)

F.F. Feet of Fines, card index in IWCRO of manorial records relating to the Isle of Wight in the Hampshire section of the Public Record Office

IWCAC Isle of Wight County Archaeological Centre

IWCRO Isle of Wight County Records Office

OE Old English

S Sawyer (1968)

The following abbreviations are used by Kökeritz (1940) and appear in quotations above:

Ct Court Rolls (unpublished) in Public Records Office

DB Domesday Book

Wor Worsley manuscripts in the possession of Francis Worsley of Twickenham at the time of publication (1940)

Notes

1 Anglo-Saxon charters are usually indexed using the numbers published by Sawyer (1968). This

convention is followed here.

2 *7seo ut læs mid oþrum mannum gemære* 'And the outlying pasture common with other men' refers to an area of common pasture beyond the bounds of the estate.

3 It has been claimed that the four estates on the Isle of Wight which were granted to Winchester New Minster in the will of Æthelmær (S 842) were amongst New Minster estates which were seized by William I, and were then bestowed on officers of his army:

"Ethelredus rex filius Edgari regis dedit novo Monasterio Wyntoniensi in insulâ Etha Meton cum duabus hydīs [Heantune]. Badingborn cum quatuor hydīs [Bathingbourne], Velokedune cum tribus hydīs [Meolocdune], Estede cum una hyda [Stathe] et hoc Wilhelmus abstulit, et militibus suis dedit (Rudborne, 'Historia major', quoted from Dugdale 2.428, footnote e)" (Kökeritz 1940,26).

4 The four estates on the Isle of Wight which were part of Æthelmær's bequest to the New Minster have been given the following reference numbers in Margham (2003): *Heantune* S 842i, *Bathingbourne* S 842ii, *Meolocdune* S 842iii, and *Stathe* S 842iv. This usage is followed here.

5 A *modus* was a private arrangement made between a vicar and a parishioner for the commutation of tithes paid in kind to a cash payment (Friar 1991,256).

6 The pastoral use of Ashey Down in the tenth century is of interest in the context of Drewett's survey of the down (1972). Remnants of 'Celtic' fields and ridge and furrow were mapped. The latter would appear to be of a relatively late date due to the absence of a reversed S-shaped plan.

7 Ælfric's Colloquy, a series of dialogues devised to teach boys Latin grammar dating from the tenth century, contains the following:

What do you say, shepherd? Do you have to work hard?

Yes, sir, I do. In the early morning I drive my sheep to their pasture and watch over them with the dogs, whether it is hot or cold, in case wolves attack them. Then I take them back to their folds, and I milk them twice a day. I move their folds and I make cheese and butter. And I am loyal to my lord (Cavill 2001,43).

8 Chillingwood probably means "'wood at the valley place or stream', from Old English *ceole* (or **ceolle*) with *-ing* and *wudu*. Alternatively the first element may be an Old English masculine name Ceolla, giving a meaning 'wood at Ceolla's place' (with *-ing*), or 'wood of the family or followers of a man called Ceolla' (with *-inga-*)" (Mills 1996,39). Regardless of its precise derivation, Chillingwood contains the element *-ing* or *-inga-*, both of which indicate a place-name formulated within the pagan Anglo-Saxon era.

9 The place-name *Stathe* means 'the landing place' (Mills 1991,308).

10 The later Anglo-Saxon landscape of the *Stathe* area is considered in more detail in Margham (forthcoming), where other sources are used to complement the information given in the boundary clause of S 842iv.

11 Adderbury (Oxfordshire) is referred to as *Eadburggebyrig* when it was mentioned in the will of Wynflæd along with other properties c.950 (S 1539; Mills 1991,2). It was bequeathed to Winches-

ter Old Minster in 1015 in the will of the Ætheling Athelstan (S 1503). It was held by the bishop of Winchester in 1066 and 1086, as an estate of 14½ hides (Caldwell 1978,155a).

12 In the later years of Edward the Confessor Wroxall was held by the Countess Gytha, the widow of Earl Godwin of Wessex, who had died in 1053. The Domesday reference reads "Countess Gytha held it from Earl Godwin in freehold" (Munby 1982,39d). This implies that Wroxall had been obtained by Earl Godwin in or before 1053. The identity of Osgod is uncertain. He may have been an as yet unidentified individual who after exchanging the estate which he held at Wroxall for the Old Minster's estate at Adderbury, predeceased Earl Godwin, so that Wroxall was no longer in the hands of the Old Minster by 1053. It is however possible that the Osgod of the charter may have been Osgod Clapa, who was outlawed in 1046 "...then an explanation might be found for the state of affairs in 1086, namely that Osgod's forfeited estate of Wroxall had been bestowed by the king on Earl Godwine, while the Old Minster had regained possession of Adderbury. The chief objection to this is that Osgod Clapa is generally associated with the eastern counties only" (Robertson 1956,433). Another possible candidate is the Osgot who was recorded as a holder of land at *Scaldeford* in 1066 (ibid.), but this would not explain why there is no reference to him in the Domesday entry for Adderbury.

13 A solidate was an area of land with an annual value of one shilling.

14 A marcate was an area of land with an annual value of one mark (13s 4d).

15 The sources used by the author to define the landscape regions of the Isle of Wight are the soil survey of south-east England (Jarvis et al. 1984), 1:50,000 geological map (IGS 1976), 1:63,360 agricultural land classification map (MAFF 1969), ancient woodlands survey (Hornby 1981), Domesday Book-Hampshire (Munby 1982), references to landscape features published by Hockey (1970,1982,1991), references to landscape features in IWCRO card index, topographical descriptions of the Isle of Wight predating the mid 19th century, and papers about historical ecology published in The Proceedings of the Isle of Wight Natural History and Archaeological Society. The names given to the various landscape regions of the Isle of Wight are the author's own, with the exception of The Undercliff.

16 The six deer parks mapped by Basford (1989) within the Northern Lowlands are North Park, Shalfleet, Swainston, Watching Park, Wootton and Nunwell. Parks at Lee Farm in Shalfleet, Northwood Park in an area west of Cowes, and 'Old Park' at Quarr are possibilities (Margham 2003,41,note 2).

17 Recent research by Philip Masters for the Appuldurcombe Conservation Plan has produced references to Appuldurcombe Lodge from 1571 onwards. Masters considers this to have been a deer lodge in the area of present day Appuldurcombe Farm. He comments that 'its location is typical, overlooking land that was probably a deer lawn, with the main tree cover to the south' (Vicky Basford, personal communication).

18 *Lēah* can be interpreted as 'forest, wood, glade, clearing', with a later meaning of 'pasture, meadow' (Gelling and Cole 2000,237). Gelling suggests that the development of the meaning when *lēah* began to lose its senses of 'wood' and 'forest clearing' occurred in the tenth century (Gelling 1992,16). This development of meaning was influenced by a confusion with *læs* 'pasture, meadowland' (Gelling 1984,199). This confusion can perhaps be explained by both names being appropriate for wood-pasture. In discussing *leage/lege* in S 766, Margaret Gelling has indicated that *leage* is the dative of *lēah* which can be taken to have its latest sense of 'pasture' (personal

communication). However, the case for arguing that *leage* can refer to wood-pasture is strengthened by Della Hooke's observation that the very extensive landscape region of wood-pasture, the Weald of Sussex, Surrey and Kent, was often referred to as *Andredesweald* but was alternatively known as *Andredesleage* (Hooke 1998,145). In addition to the references to *lē(ah)* at Watchingwell in S 766, there are eleven settlement names within the Northern Lowlands which contain the place-name element *-lēah*, many of which may refer to wood-pasture.

19 Whilst *hwaetincg le* can be taken to mean 'the woodland clearing at the place wheat is grown' (Margham 2006,90), the growing of wheat in this wet clayland area was presumably sufficiently unusual to be recorded in the place-name within a wood-pasture environment. The estate centre, now known as Upper Watchingwell, is less than 1 km from Northpark Copse, which lies to the west just beyond the bounds of S 766 and within S 274 at Swainson. An interesting small-scale survival was recorded here during the 1981 Ancient Woodlands Survey, '.. a very unusual site being a wood-pasture relic (part of the former Swainston Park) and still being used for cattle grazing in 1981. It contains an exceptionally rich epiphytic flora, and is of importance as one of the best sites for lichens on the island ..' (Hornby 1982,25).

20 The translation of *ge clyppedan treowa* is problematic. Margaret Gelling suggests 'embraced tree', and if so perhaps refers to ivy (personal communication). Della Hooke thinks that the term includes 'to involve' and is not sure how this is to be interpreted (personal communication).

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ACKNOWLEDGEMENTS

Thanks to the staff of the Isle of Wight County Archaeological Centre for their support. I am especially grateful to Dr Margaret Gelling for helping me with my translations of the charter bounds and for her willingness to answer questions about the interpretation of various words and phrases in the Old English bounds. Dr Della Hooke provided further information about aspects of the bounds. The late Bob Adams of Wellow drew my attention to Bearman (1994). Roy Brinton provided topographical information about the Ashley area, some of which was based on the as yet unpublished manorial history of the Isle of Wight by Clifford Webster. Colin Pope and Vicky Basford commented on my work on the landscape regions of the Isle of Wight. Also thanks are due to the staff of the Isle of Wight County Record Office, the staff of Knaresborough library, Middlesborough reference library and of the City of Leeds reference library. Dr Maurice Turner and Vicky Basford provided invaluable comments on an earlier draft of the present paper and Vicky Basford provided additional references. Lastly, I would like to thank Catherine Margham for accompanying me on my various walks along the charter bounds of the Island.

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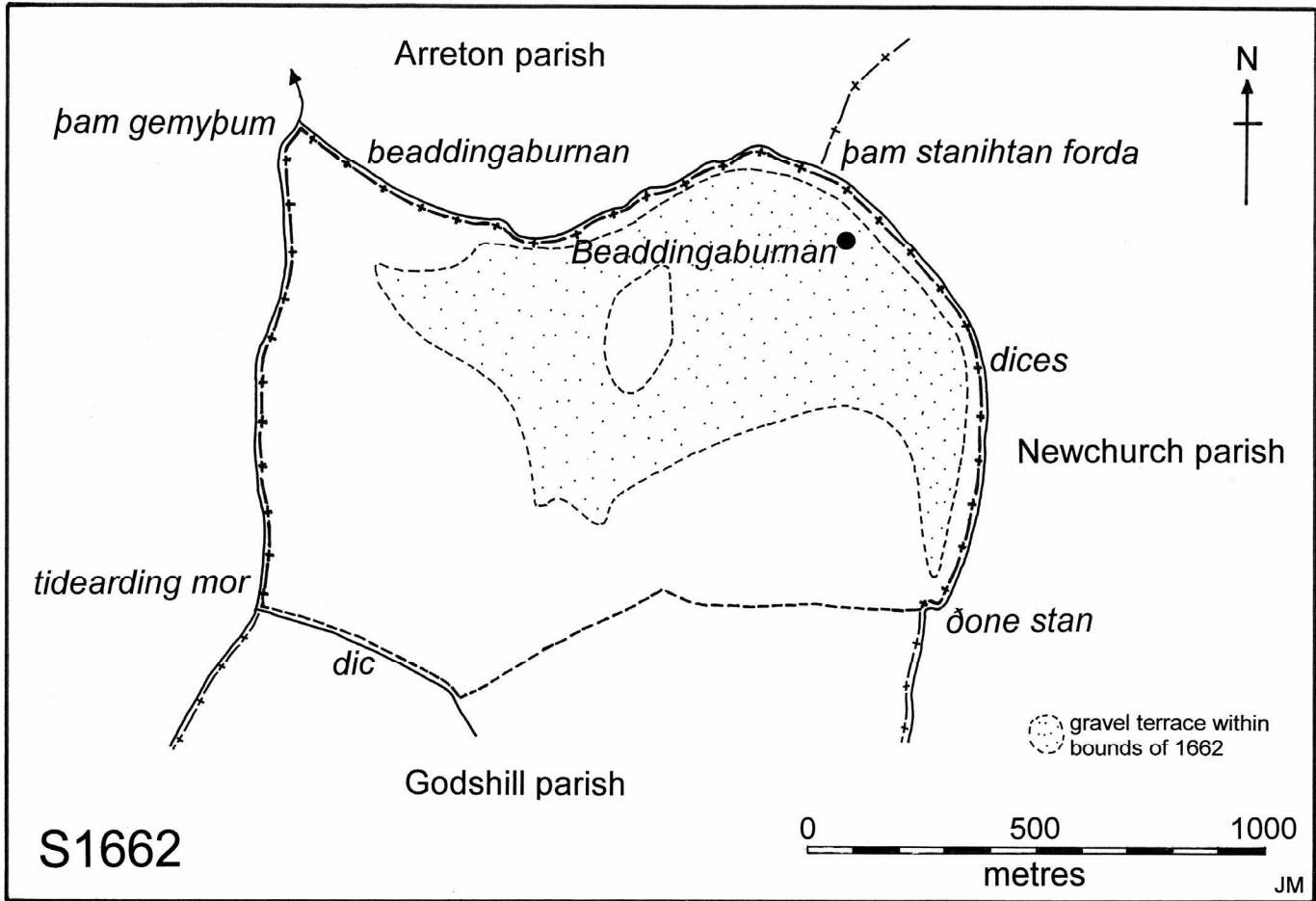


Fig 1: S 1662, grant of 2 hides at Bathingbourne by King Eadred, 951x955 A.D.

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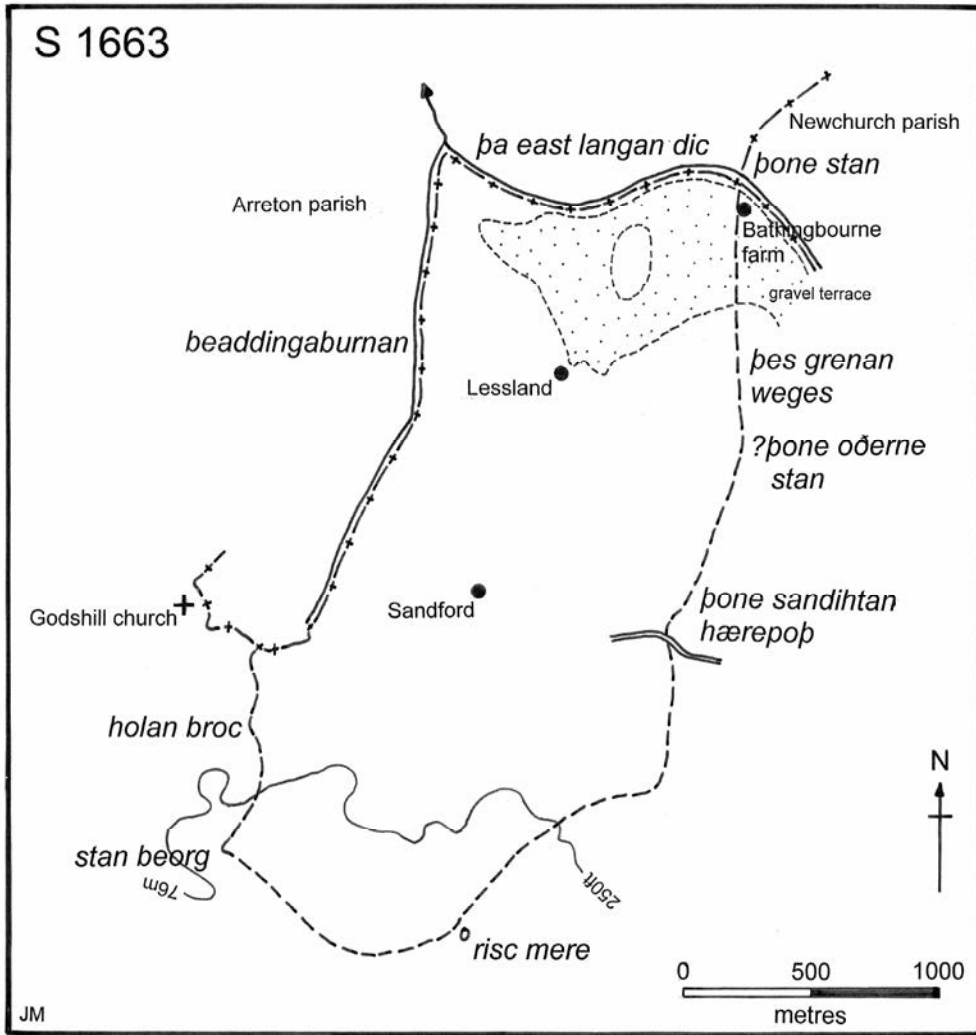


Fig 2: S 1663, grant of 5 mansae at Bathingbourne by King Eadwig to Aethelgeard, 955x957 A.D.

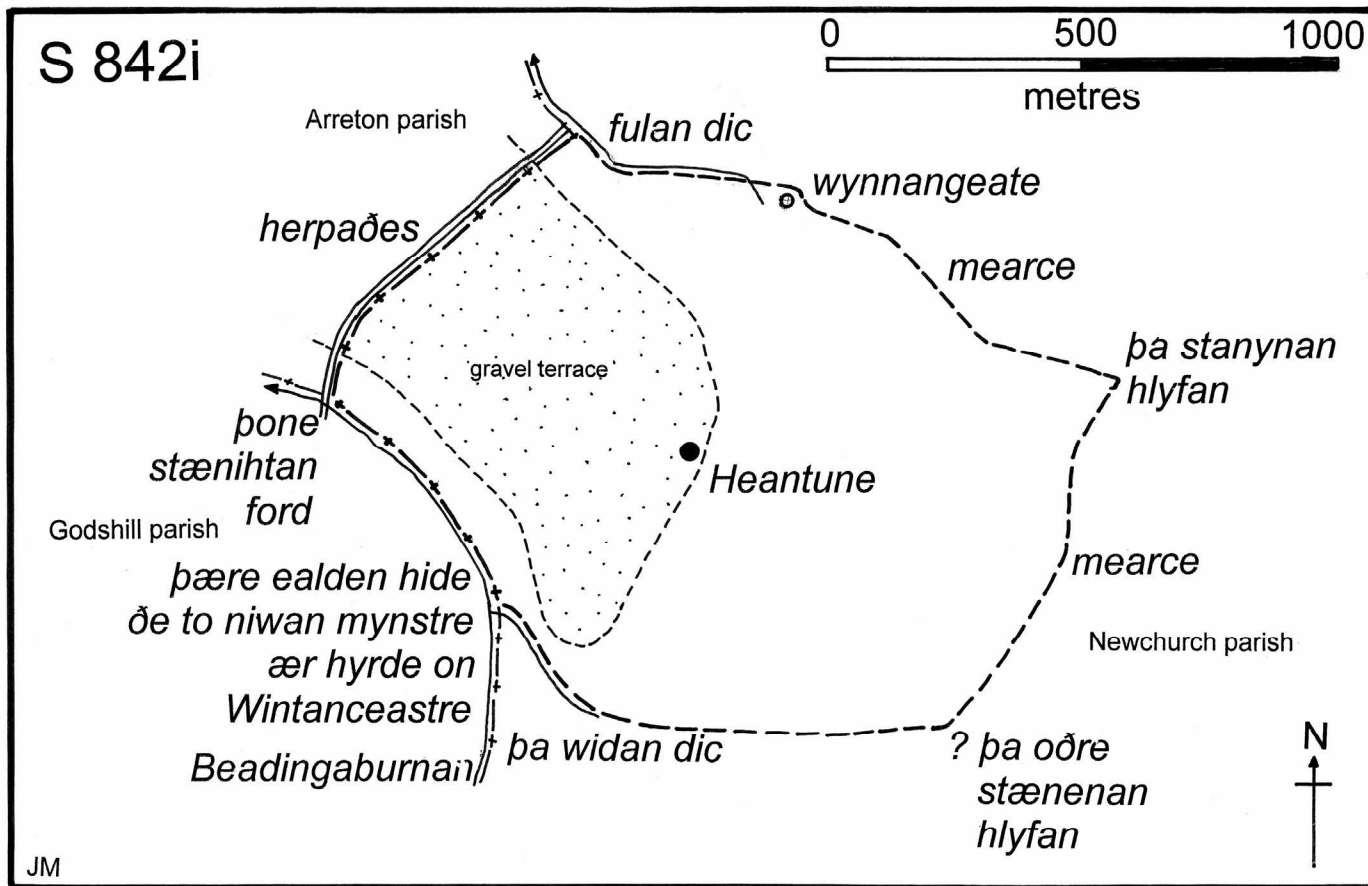


Fig 3: S 842i, confirmation by King Ethelred of a bequest by the eardorman Aethelmaer to Winchester New Minster of 2 hides at Heantune, 982 A.D.

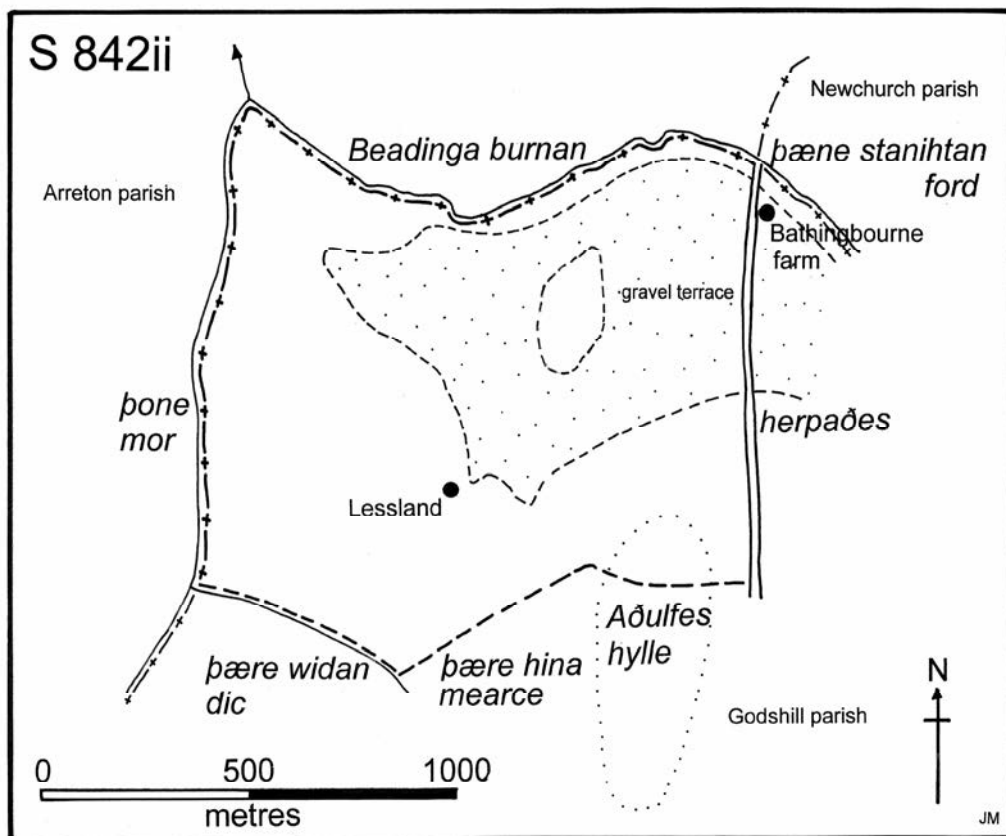


Fig 4: S 842ii, confirmation by King Aethelred of a bequest by the earldorman Aethelmaer to Winchester New Minster of 2 hides at Bathingbourne, 982 A.D.

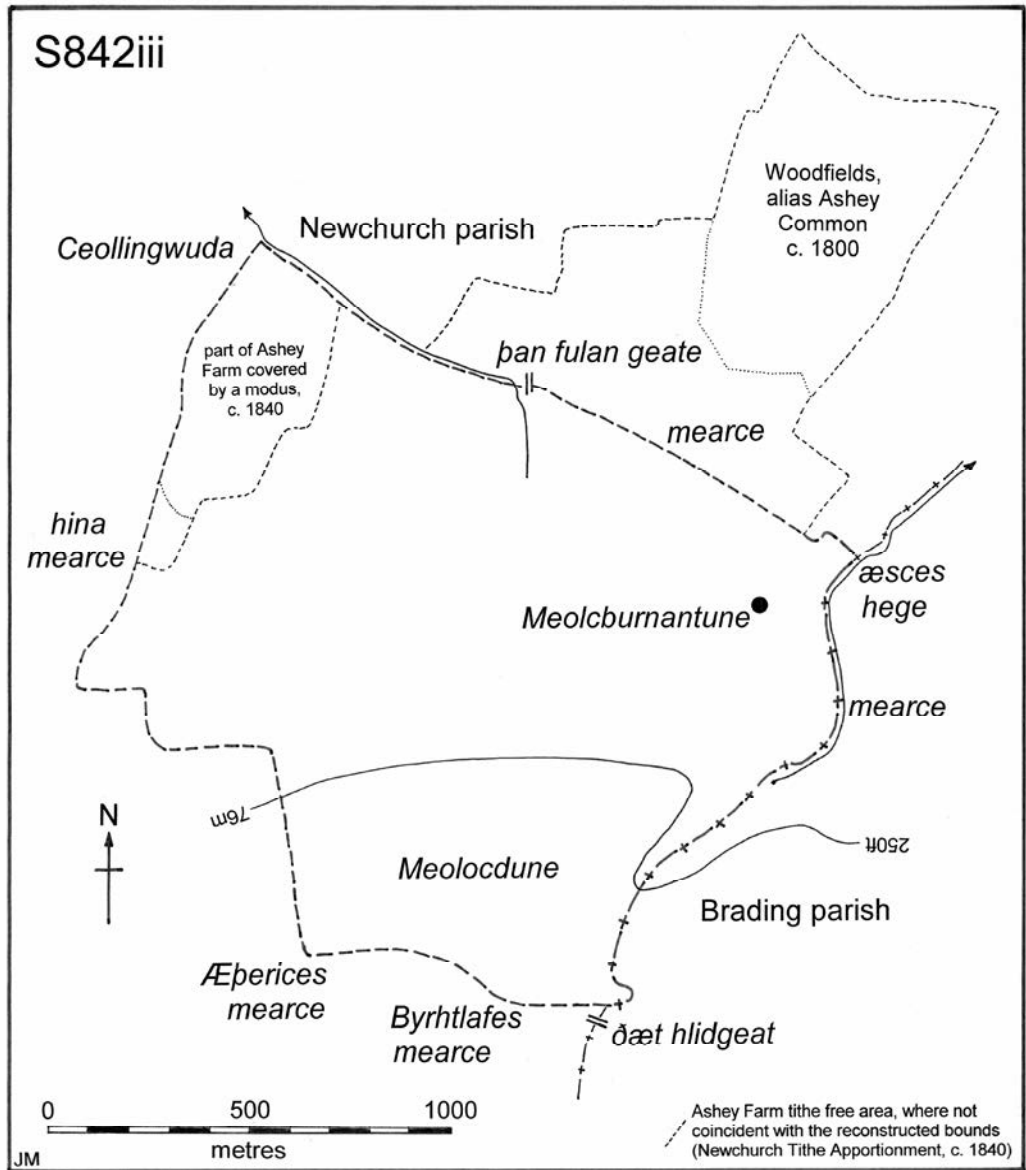


Fig 5: S 842iii, confirmation by King Aethelred of a bequest by the earldorman Aethelmaer to Winchester New Minster of 2 hides at *Meolodune*, 982 A.D.

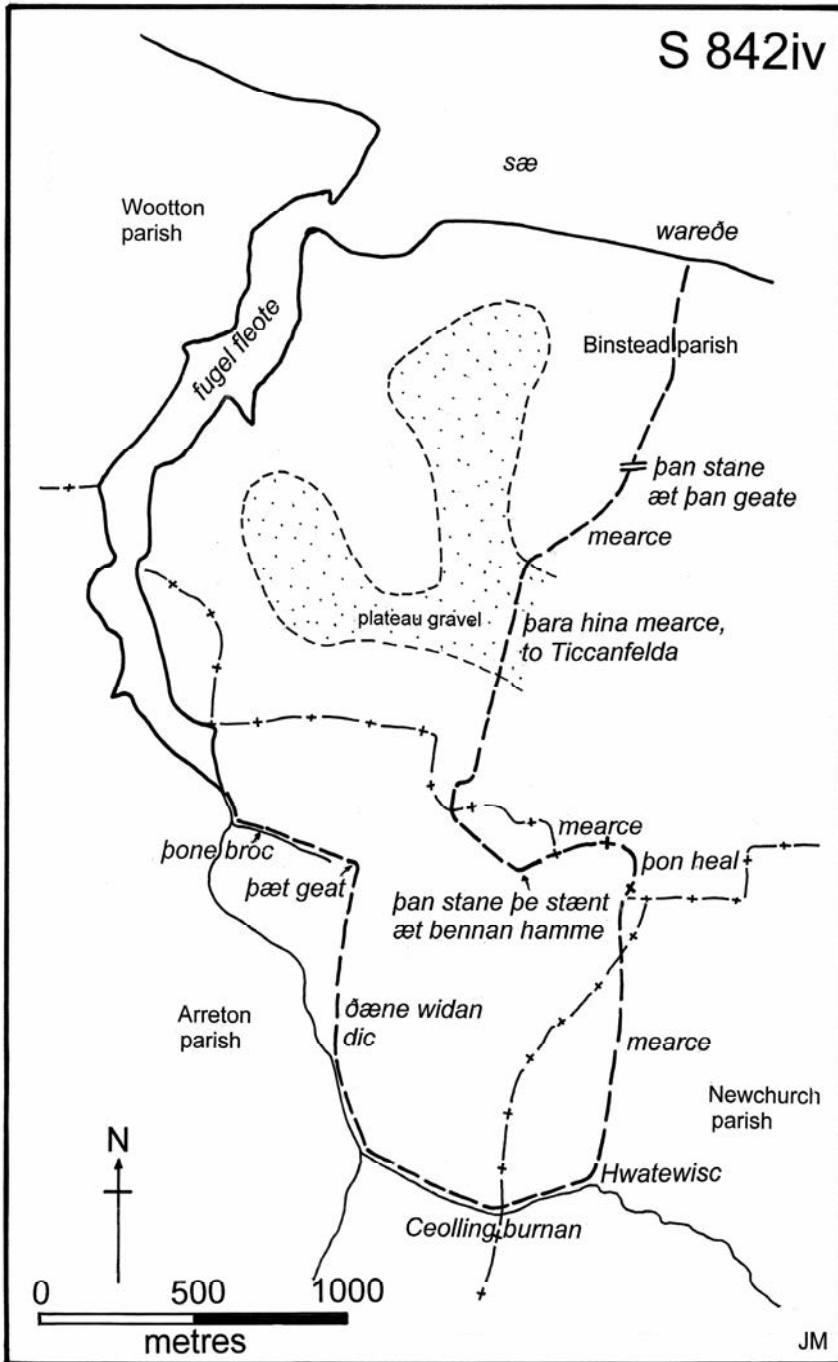


Fig 6: S 842iv, confirmation by King Aethelred of a bequest by the earldorman Aethelmaer to Winchester New Minster of 1 hide at *Stathe*, 982 A.D.

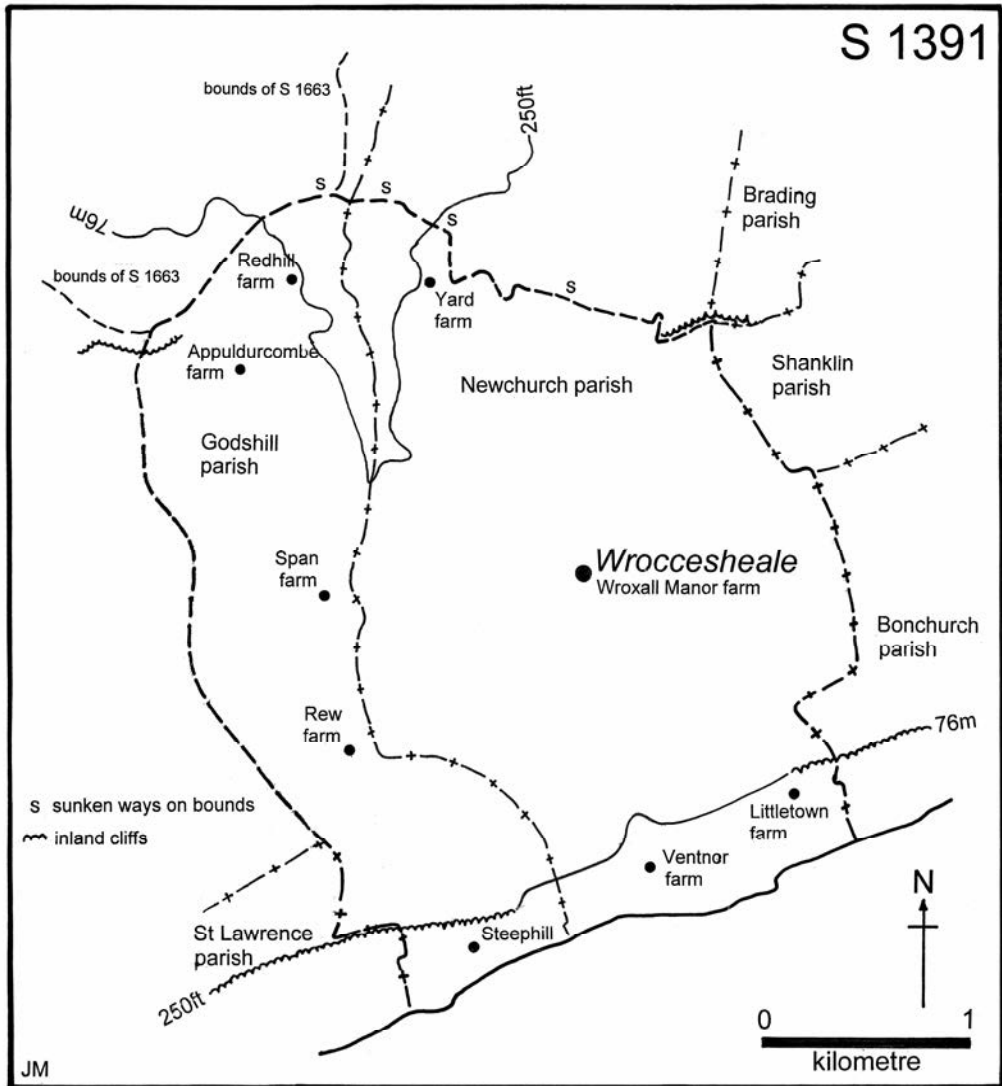


Fig 7: S 1391, exchange between Bishop Aelfwine of Winchester Old Minster and Osgod of Wroxall and Adderbury (Oxfordshire), 1043x1044 A.D.

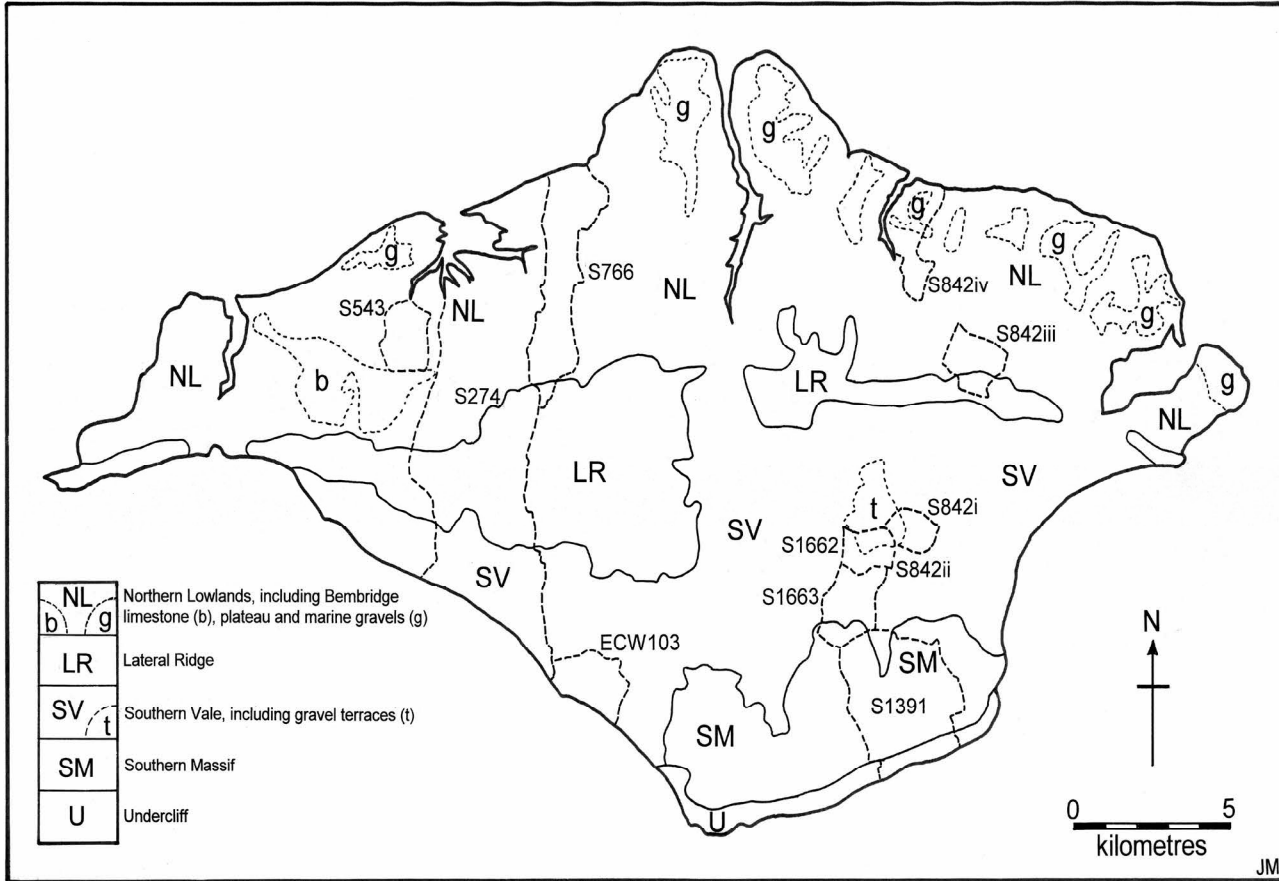


Fig 8: The landscape regions of the Isle of Wight and Anglo-Saxon charter bounds post dating 900 A.D.

**A FRAGMENT OF A LATE MEDIEVAL CHAFING DISH OF
SAINTONGE WHITE WARE FOUND AT BINSTEAD,
ISLE OF WIGHT**

Kevin Trott

In September 2003, an unusual sherd of pottery was shown to the writer for identification. It was reported as having been found with other sherds during routine gardening at 7 Greenway Road, Binstead. The other pottery was later discarded when the finder sold the property. Due to its unusual decoration, this particular sherd was retained by Mrs Brenda Butler.

The fragment is of early Tudor date and belongs to a late Saintonge white ware chafing dish. It is decorated with an applied face on the crown of the vessel. It displays a dark olive brown glaze (2.5Y 3/3) with a strong brown glaze (7.7YR 5/6) applied over the face and exterior to create a mottled appearance.

This chafing dish can be dated around c. 1490-1510. It claims parallels with further Saintonge vessels found in excavations in Southampton where this ware has been classified as fabric SOU125 46. A similar face appears on vessel No 1065 recovered from a pit 66 in the High Street excavations at Southampton (Platt & Coleman-Smith, 1975, (2) 148-9, fig 190). Evidence in Southampton shows a marked decline in the import of Aquitainian pottery after the mid-14th century yet there is a perceptible revival in the 16th century. Other imported French chafing dishes, devoid of anthropomorphic lugs, have been reported from 16th century contexts at Carisbrooke Castle (Young, 2000, 130, fig 46, nos 73-75).

The find spot at Greenway Road, Binstead, has not been subject to archaeological investigation. It is situated in a shallow valley some 1.5km from the medieval Cistercian abbey of Quarr and 1km south of the medieval church of Holy Cross and its nearby medieval limestone quarries. To the southwest of the find-spot lies the Newnham valley with its medieval fishponds and monastic grange. This imported item hints at further medieval/Tudor settlement in the Binstead area and the possibility of a dwelling in this particular vicinity.

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Acknowledgements

The fragment of pottery was made available for study by Mrs Brenda Butler, and arranged by Mrs J. Booth and Helen Butler. Duncan Brown of the Southampton Museum Service made initial identification of the sherd and Mike Cahill kindly provided a photograph. Their assistance is gratefully acknowledged.

SAINTONGE WHITE WARE FOUND AT BINSTEAD

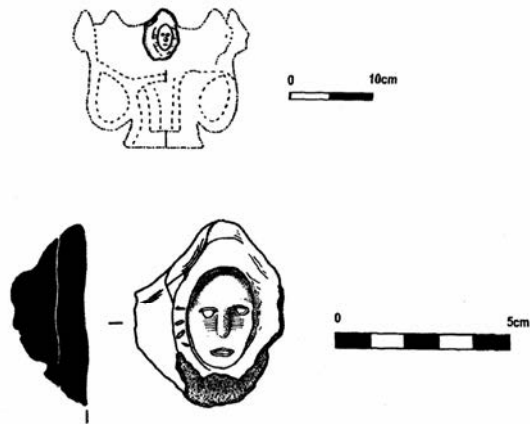


Fig 1. Reconstruction of the Binstead chafing dish and the original fragment

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LUNG INFECTIONS IN RED SQUIRRELS ON THE IOW

Helen Butler

Since 2000, any red squirrel bodies, in good condition, retrieved by the general public have been submitted to a post mortem examination. This article is a shortened version of a paper published in The Veterinary Record (Simpson et al. 2006). It describes a Hepatozoon species found in the lungs of red squirrels and considers its possible role as a pathogen.

Through advertising in Wight Squirrel Project newsletter and the local media, the general public has been asked to retrieve dead red squirrels for post mortem examination. The initial examination was carried out by Helen Butler and, if pathology was suspected, samples were taken and fixed in 10 per cent buffered formol saline. These samples were then sent to Vic Simpson at the Wildlife Veterinary Investigation Centre in Cornwall.

Red squirrels are the only squirrel native to the British Isles. They are disappearing from the Mainland fast and are being replaced by the introduced American grey squirrel (*Sciurus carolinensis*). It's believed the grey squirrel outcompetes the native red squirrel for food and nesting sites. Grey squirrels also carry a squirrel poxvirus, which is fatal to reds.

The Isle of Wight is an important stronghold as the Solent provides a barrier against grey squirrel infiltration. The Isle of Wight has around 3,500ha of woodland which should carry approximately 3000 red squirrels. Numbers fluctuate annually according to the success or failure of the autumn seed crop. They also fluctuate seasonally when young are born.

Between June 2000 and December 2006, 307 post mortem examinations have been carried out on the Island's red squirrels. Between 2002 and 2004, 51 of these animals showed signs of pathology and samples were taken for histological examination. Some were natural deaths but the majority had been killed by road traffic or some other form of trauma. The squirrels were categorised into juvenile, subadult or adult on the basis of weight, dentition, body dimensions and observer experience. Unfortunately, 2 sets of tissue samples were autolysed and had to be discarded, leaving 49 samples for the laboratory. Various histological techniques were used in order to discover the cause of observed tissue damage.

The lung sections from the 49 samples revealed many lesions consistent with death due to trauma, including congestion, emphysema, atelectasis*, thickened alveolar*** walls, thrombosed blood vessels and haemorrhage. Large protozoal-type schizonts** (groups of cells. See Fig 1) were present in the lungs of 18 squirrels (37 per cent), sometimes in very large numbers. The schizonts were ovoid and in various stages of development. The majority were in the alveolar walls and many within the capillaries. Generally, there appeared to be minimal inflammatory response to the schizonts, although in several cases the alveolar walls were thickened and there was evidence of oedema and fibrosis.

DNA extracted from the lungs containing schizonts was amplified and nucleotide sequencing showed the parasite to be a species of *Hepatozoon****.* This was confirmed by immunohistochemistry.

The prevalence of infection with *Hepatozoon* species was different in squirrels of different ages. It was noticeable that none of the 5 juveniles examined carried the infection but there were schizonts in 7 of the 11 subadults and 11 of the 33 adults. There was a significantly higher prevalence of

LUNG INFECTIONS IN RED SQUIRRELS ON THE IOW

infection in the 12 squirrels found dead in gardens, 9 of which were infected (75%). Of the 27 road traffic accidents, only 7 were infected (26%). The weight of infection varied greatly and was particularly heavy in some cases.

Hepatozoon infections have been found in a range of vertebrate hosts including reptiles, amphibians, birds and mammals. Their lifecycle involves an invertebrate vector, often an arthropod, and the vertebrate host becomes infected by ingesting the vector. Schizogony occurs in various tissues of the vertebrate host, and gamonts**** are released and infect cells of the haemolymphatic system. The life cycle is completed when arthropods feed on an infected vertebrate host (Smith 1996).

Hepatozoon species infection in grey squirrels was described in the USA by Herman and Price in 1954. The organism was identified by them as *Hepatozoon sciuri* but later renamed by Clark in 1958 as *Hepatozoon griseisciuri*. Clark described gametocytes in blood samples from 22 of 24 apparently healthy wild-caught adults and in 19 of 21 young squirrels aged 36 hours to four weeks. No schizonts were seen in smears and sections of liver, spleen and bone marrow except in the 36 hour old animal where they were present in all three tissues. Lung samples were not examined. Clark (1958) also tried to determine the vector and concluded that a gamasid mite commonly found in dreys was the natural vector. Recent studies have shown that a *Hepatozoon* species, presumably *H griseiscuiri*, is a common parasite of grey squirrels in UK (Jawdat 1975, cited in Watkins and Nowell 1991, Britt and Molyneux 1979, Watkins and Nowell 2003).

In England and North America, most authors have not commented on *H griseiscuiri* species as a possible pathogen. Others, (Clark 1958, Hendricks 1975, Watkins and Nowell 1991, 2003) concluded there was no evidence that it was pathogenic. On the other hand, Davidson and Calpin (1976) described *H griseiscuiri* infection in association with thickening of the alveolar walls, pulmonary congestion and other changes similar to those seen in the worst affected cases in the present study. Looking at these two reports together suggests that *Hepatozoon* species may be pathogenic to red and grey squirrels.

Of the 18 Isle of Wight squirrels with *Hepatozoon* species in their lungs, 13 had lesions in other organs, including heart, liver, kidney or spleen. Although many of these lesions did not appear to be directly related to the presence of *Hepatozoon* species, it is possible that the infection may have compromised the squirrels' immune response and allowed other infections such as *Toxoplasma* and *Bordetella* species to occur. In grey squirrels, Davidson and Calpin (1976) suggested that the presence of *Hepatozoon* species may increase the likelihood of their becoming infected by other respiratory diseases and Keymer (1983) reported lesions of pneumonia together with concurrent *Hepatozoon* infection in 3 grey squirrels found dead in Norfolk. A similar situation may exist with reds.

The only previous record of what was probably a *Hepatozoon* species in a red squirrel was made by Coles in 1914. Two red squirrels had been kept in a cage with two grey squirrels. The two red squirrels died and samples of heart, lung and liver from one were examined. The cause of death was severe toxoplasmosis with concurrent infection by what appears to have been *Hepatozoon*. It is possible that the *Hepatozoon* infection was contracted from the grey squirrels.

Although *Hepatozoon* species infection is common in grey squirrels in both England and North America, it has not been proved that the same *Hepatozoon* species infects populations in both countries. Given that grey squirrels are not present on the Isle of Wight, it is possible that the *Hepatozoon* species found in this population of red squirrels is native to them. Further samples are

LUNG INFECTIONS IN RED SQUIRRELS ON THE IOW

required in order to establish whether the parasite is present in other red squirrel populations, how it is transmitted and if it contributes to their decline.

Reference:

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Acknowledgement:

Thanks is due to Mr Vic Simpson of The Wildlife Veterinary Investigation Centre in Cornwall, without whose interest and dedication this study would not have been possible.

*Atelectasis: A term used to describe partial or complete collapse of the lung.

** Schizogony: The division of cells, especially of protozoans, in nonsexual stages of the life history of the organism.

***Alveolar: Of the alveolus, the final subdivision of the lung where gas exchange takes place.

****Hepatozoon: A genus of coccidian protozoal parasites, in which schizogony occurs in the visceral organs.

*****Gametocyte: A cell capable of dividing to produce gametes, e.g., sperm or ova. Synonym: gamont.

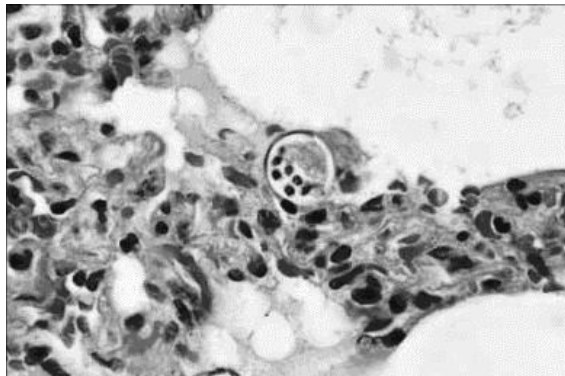


Fig 1. Large Hepatozoon species schizont with 7 visible nuclei. The host cell's nuclear material is displaced to the margin of the cell in this photomicrograph of a section of the lung of a Red Squirrel.

Photograph courtesy of The Veterinary Record.

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RECENT ADDITIONS TO THE IOW COUNCIL GEOLOGICAL COLLECTION

Martin Clive Munt

Introduction

There has always been a steady flow of new material into the Island's only registered public geological collection. New additions to the collection comprise donations, purchases and staff finds. It is very pleasing to note the generosity of some collectors and members of the public who have made casual finds and are happy to donate them into public ownership. Recently we have increased access to collection information by putting on-line a Type, Figured and Cited Catalogue which lists those objects in the collection which have recognised scientific importance. The intention of this short report is to put into print a few of the interesting finds which have come into the museum's care which may otherwise go un-remarked upon and to act as pointers to what may be over-looked as common finds.

Recent Acquisitions

Plagiolophus sp jaw IWCMS.2005.50 was found in 1983 by National Trust warden Robin Lang and donated in 2005. The 5 cm long jaw fragment has four teeth still in place and was found in the Bembridge Limestone Formation (Solent Group, Late Eocene) at Prospect Quarry. *Plagiolophus* is a Late Eocene to Early Oligocene horse, isolated teeth of which are not uncommon in the Lower Hamstead Member (Bouldnor Formation: Solent Group) at Bouldnor, but are otherwise rare finds.

Inoceramus sp IWCMS.2005.90 comprising both valves, it is an interesting addition to the collection. It was found and donated to the collection by Clint Bouwer, from the Upper Greensand Formation in Compton Bay. Inoceramid bivalves were abundant during the Late Cretaceous; they have great value in correlation as individual species have extensive geographical distributions. They are medium to gigantic in size, and often have one valve flat and the other domed.

Goniasterid starfish IWCMS. 2002.218 found by then Assistant Curator Dan Pemberton. It comprises a segment of marginal frame in a small block of Glauconitic Marl (Grey Chalk Subgroup). It was found in the broken down remains of a dry-stone wall on the Coastal Footpath near St Lawrence. Goniasterids are pentagonal shaped starfish with short arms, but sometimes without arms, marginal blocks are rectangular.

Melanooides (Tarebia) acuta (J. Sowerby, 1822) is probably the most common gastropod found in the Solent Group, if not the whole of the Isle of Wight. However IWCMS.2003.41 is different, the specimen is in a small block of the Insect Limestone of the Bembridge Marls Member (Bouldnor Formation: Solent Group). With the exception of '*Lymnaea*' spp and planorbid gastropods, molluscs are uncommon in this limestone. *Lymnaea* belongs to the pulmonate group of gastropods and is therefore an air breathing snail, whereas *Melanooides* is a gill bearing prosobranch. It is unlikely that *Melanooides* would have lived for long in what was probably an anoxic lake.

In recent years there have been a number of interesting finds of corals from the Perna Bed (Lower Greensand Group), notably at Yaverland. Denver Fowler donated a specimen of a colonial coral similar to *Isastrea* (IWCMS.2005.20) as did David and George Whisson (IWCMS.2002.54). Other finds include solitary mushroom-like corals assigned to the genus *Fungiina*, two associated specimens were found by the author (IWCMS.2005.46), these corals lived attached to large shells.

The pterosaur *Istiodactylus latidens* (Seeley, 1901) formerly known as *Ornithodesmus latidens* has

RECENT ADDITIONS TO THE IOW COUNCIL GEOLOGICAL COLLECTION

a broad duck-like rostrum. A rostrum fragment in the form of an internal cast preserved as pyrite, found on the beach in Compton Bay by Tessa Brooks, probably Vectis Formation (Wealden Group) IWCMS.2003.40.

A partial but well persevered specimen of the fish *Pachyrhizodus salmoneus* (Günther, 1872) was found by Oliver Cronin and his family in February 2004 from the Gault Clay Formation at Binnel Bay. This donated specimen is in four parts comprising the skull and anterior portion of the body (IWCMS.2004.53).

Albert Budden has made some very important finds since coming to live on the Island. His finds include a cycadeoid stem (IWCMS.2005.102), and a new species of fish from the Gault Clay Formation (IWCMS.2005.101).

A sandstone cast of a cycadeoid stem IWCMS.2005.53 was donated by Harry Daine. It probably originated from the Sandrock Formation (Lower Greensand Group) and was found in Binnel Bay. Harry also donated a trace fossil from the Carstone (IWCMS.2005.40).

Mollusc shells record the life history of the animal: drill holes in bivalve and gastropod shells indicate predation by naticid or muricid gastropods, the peeling of gastropod apertures, attack by crabs. Typically gastropod shells will show laminar shell growth caused by the slowing down of whorl expansion in maturity. *Granulolabium plicatum* (Bruguière, 1792) is an abundant potamidid gastropod in the Cranmore Member (Bouldnor Formation: Solent Group). IWCMS.2002.59 found by former Assistant Curator Dan Pemberton is an unusual example of *G. plicatum*, showing eccentric growth.

Eccentric growth pattern is seen occasionally in *G. plicatum* and also in large specimens of the potamidid *Tympanotonos (Eotympanotonos) funatum* (Mantell, 1822) var. from the Bembridge Marls (Bouldnor Formation: Solent Group). Examination of the surface of the shells has revealed the pattern of the plates of barnacles of *Balanus* sp. Barnacle infestation of the shells was evidently *in vivo* as whorl growth eventually surrounded the barnacle, generating the growth eccentricity.

Crabs are well known from the London Clay Formation (Thames Group). IWCMS.2002.232 is a good example, though preserved in pyrites. It was found and donated by Dominic Ward.

Conclusion

It is always pleasing to report interesting new finds, clearly spectacular and rare finds of dinosaurs readily grab headlines. The find, which attracted most media attention, was that of the new form of ornithocheirid *Caulkicephalus trimicrodon* Steel et al 2005. First brought to the museum by Gavin Leng and then added to by John Winch, Martin New, Dan Davies, Lorna Steel and the author. This pterosaur was found in the Wessex formation at Yaverland. It was the subject of a Channel 4 documentary based loosely around events. If the documentary reported what actual events the story would have been a far greater. However, it is the smaller finds which form the core of collections, and such finds can very often inform us much more about the past.

RECENT ADDITIONS TO THE IOW COUNCIL GEOLOGICAL COLLECTION

Acknowledgements

Clearly we can't list all recent acquisitions and their finders, and there are other important finds not included in this report, however, the museum wishes to thank all the people mentioned above and everybody who has supported the Island by placing their finds in the geological collection. Peter Forey (NHM) is thanked for identifying the fish remains from the Gault Clay Formation.

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MOTHS RECORDED DURING 2006 INCLUDING ONE MACRO NEW TO BRITAIN

S.Knill-Jones

With one specimen new to Britain, four new County records and five new Vice County records, 2006 proved to be the best year in living memory for moths on the Isle of Wight.

Nationally. 2006 was the warmest year since records began with July and September being the warmest months ever. October was also one of the warmest on record. The rainfall at Freshwater was about average for the year with the three wettest months being October (118.9mm), November (117.8mm) and December (104.8mm.). June was the driest month of the year with 3.1mm rainfall and January was the second driest month with (19.3mm) rainfall. The Winter of 2005-2006 was also extremely dry and hose pipe bans were in force throughout many southern counties during the Summer.

The year started well when on 3 Feb, I had a telephone call from Dave Dana saying that he had found a cocoon on some Columbian bananas which he had purchased at Morrisons in Lake. He brought it over that same day and I suggested that it was probably the Banana Stowaway *Antichloris eriphia* (Fabr.). The moth emerged two days later and it was indeed an example of this species and is a new County record. A Hummingbird Hawk-Moth *Macroglossum atellatarum* (Linn.) was seen at Newport on 15 Jan, which is further evidence that this species now overwinters in this country.

On 11 Sept, I caught a moth which was unfamiliar to me and I identified it as the Alchemist *Catephia alohymista* (D & S.). At the end of the month Steve Pittis visited me and on seeing the moth he thought that it was slightly different to the Alchemists he had from the continent. He photographed my specimen, and e-mailed it to Martin Honey at the British Natural History Museum in London who confirmed that it was an example of *Aedia leucomelas* (Linn.), a species new to Britain. An English name, the Sorcerer, was suggested to me by Bernard Skinner and I hope that this name will be adopted.

This was the start of my best week ever for rare migrants as on the following night 12 Sept, I recorded the Passenger *Dysgonia* (Linn.) at Totland which is a new County record.

James Halsey took a female Porters Rustic *Athetis hospes* (Freyer) at Bonchurch on 19 Aug from which he bred over fifty examples This is a new County record. He also took the rare migrant Pyralid *Catoptria verellus* (Zinck) on 18 July at Bonchurch which is new to the Isle of Wight.

Bernard Skinner paid a visit to the Island at the end of October. Apart from the Oak Rustic *Dryobota labecula* (Esper), he took the Crimson Speckled Footman *Utetheisa pulchella* (Linn.) at Bonchurch on 26 Oct which is the first record for the Island since 1881. On 27 Oct, He took the Slender Burnished Brass *Diachysia orichalcea*. (Fabr.) at Totland which is only the fourth Island record. On 28 Oct he recorded the fourth Island record of the Red-headed Chestnut *Conistra erythrocephala* at Bonchurch,

On 22 Dec David Biggs found some mines on Pellitory-of-the-Wall *Parietaria diffusa* at Shanklin and a few days later at Steephill Cove, which he believed to be *Cosmopterix pulchrimella*. He sent some tenanted mines to John Langmaid and he confirmed that it was this species which is a new County record. This species was first recorded from a moth trap on 13 Oct 01 in Dorset, then Guernsey on 6 Oct 02 and Cornwall in Jan 2004.

There are four other vice-county records which are new to the Island which I give below :-

Langmaid's Yellow Underwing *Noctus janthina* (Borkh.)

Taken at Bonchurch on 26 July by James Halsey,

MOTHS RECORDED DURING 2006 INC ONE MACRO NEW TO BRITAIN

24 June at Totland by Sam Knill-Jones

Cochylis molliculana, (Zell.)

On 5 Aug at Parkhurst by Tim Norris & Sam Knill -Jones .

Coleophora albidella (D.& S.)

One case found by Tim Norris on 5 Aug Ningwood Common,

Other rare migrants recorded are given below :—

Small Marbled *Eublemma parva* (Hb.).

Bonchurch 13 June & Totland 7 Aug.

Great Brocade *Eurois occulta* (Linn.) .

Two at Totland on 5 Aug, Bonchurch 5, 8 & 14.Aug

Oak Processionary *Thaumetopoea processionea*(Linn.)

Bonchurch on 19 Aug.

Portland Ribbon Wave *Idaea degeraria* (Hb.)

Bonchurch on 1 & 6 Sept.

Blue Underwing *Catocala fraxini*(Linn.).

Totland on 15 Sept & Bonchurch on 4 & 16 Sept.

Psammotis pulveralis (Hubn.).

Two on 20 July & one on 23 July at Totland.

Antigastra catalaunalis (Dup.)

At Totland on 14, 23 & 25 Sept. and 13 Oct.

Sitochroa palealis (D.&S.).

One on 7 July at Totland

Ancylois oblitella (Zell.).

At Totland on 1, 2 (Two),3 July & 5 Aug.

It was the best year ever for the Delicate *Mythimna vitellina*.(Hb.) (640 records), the Scarce Bordered Straw *Heliothis armigera* (Hb.), 670 records, the Bordered Straw *Heliothis peltigera* (D.& S.) and the Ni Moth *Trichoplusia ni*(Hb.) with fourteen records.

The Bloxworth. Snout *Hypena obsitalis*(Hb.) with five records, the Tree-lichen Beauty *Cryphia algae*(Fabr.) with nine records, Clancy's Rustic *Platyperigea kadenii* with over sixty records and the Oak Rustic *Dryobota labecula* with over fifty records are all now firmly established along the south coast of the Island.

MOTHS RECORDED DURING 2006 INC ONE MACRO NEW TO BRITAIN.

Other records of note are given below :—

Pyrausta nigrata (Scop.)

Tony Steele found a colony of this species at Monkham Copse in May 2002 which was confirmed from photographs this year.

Old Lady *Mormo* 9 Sept and at Ventnor on 25 Aug.

Archips rosana (Linn).

At Totland on 13 June which is the first record since 1969.

Caloptilia alchimella (Soop.).

14-3-05 & 17-4-06 at Totland. Confirmation that this species is now present on the Island.

Epinotia immundana (Fisch. & Rosl.).

At Totland, on 8 Aug which happens to be the first record for the Island since 1933.

Nemophora minimella . (D & S._).

This species was recorded at Monkham Copse on 5 Aug and is the first Island record since 1933.

Hyles livoraica (Esper.)

There were ten records of the Striped Hawk from Ventnor, Bonchurch and Totland in June, and September and James Halsey successfully bred this species from ovae deposited by two females that he took on 14 June. This has only rarely been achieved in this country and the three stages are included in the plate.

Trichopteryx polycommata (D&S)

Four Larvae of the Barred Tooth-strip were beaten from Wild Privet *Ligustrum vulgare* on West High Down in May from which pupae were obtained and these should emerge in March 2007. It seems that this species is established on West High Down which is excellent news as it is referred to as Notable in the Red Data Book.

Diaphora mendica (Clerok)

A very out of season Muslin Moth was recorded at Bonchurch on 7 Nov. This is usually a Spring species emerging in April and May.

2006 was certainly an historic year for rarities. Apart from being the warmest year since records began it must also have been the latest leaf fall in living memory. There were still leaves on Oaks, *Quercus sp.*, Elms *Ulmus sp.*, Birches *Betula sp.* and Sallows *Salix sp.* at the beginning of December and on some Willows *Salix sp.* in Freshwater at the beginning of January 2007, I also had ripe Raspberries *Rubus idaeus* In my garden in January 2007 which was recorded in the local press.

Acknowledgements.

I should like to thank Ian Fletcher and James Halsey for providing photographs and to Dave Wooldridge for reading and commenting on the manuscript. My thanks also go to Dr. David Biggs, Andy Butler, Peter Cramp Ian & Cathy Fletcher, Jim Cheverton, James Halsey Madge Joiner Bernard Skinner, (Weather) Steve Pittis, Tony Steele, Richard Smout and Dave Wooldridge, whose records, along with my own, form the basis of this paper.

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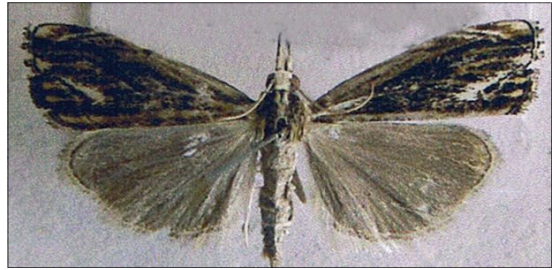
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MOTHS RECORDED DURING 2006 INC ONE MACRO NEW TO BRITAIN



Aedia leucomelas



Pyralid
Catoptria verellus



Banana Stowaway (emergence)



Banana Stowaway (adult)



Langmaid's Yellow Underwing
Noctus janthina



Porters Rustic
Athesis .hospes



The Passenger
Dysgonia

MOTHS RECORDED DURING 2006 INC ONE MACRO NEW TO BRITAIN



Striped Hawk
Hyles livoraica

RARE ISLAND SPIDER RECORD

Dr Colin Pope

In late July, Mark Coventry discovered a distinctively marked spider in one of his meadows at Luton Farm, Northwood (SZ4892). He sent the specimen to Peter Harvey, an expert from Essex, for identification. He was able to confirm its identity as an adult female *Araneus angulatus*, the first Island record. This is a rare species with fewer than 20 post-1992 records, largely confined to the south coastal counties of England. Peter Harvey states that the species will probably be classified as Nationally Scarce / Notable, but this would be based on out of date information used for a 1990 review.

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Footnote: This may not be the first record for the Island. It is recorded from Bouldnor and Ningwood Common by William Falkner (*Proc: Isle Wight nat. Hist. Archaeol Soc. Vol 2, Pt 2, P 118, (1931)*). There is also an unconfirmed record by David Biggs from Bouldner Copse on 24.08.91.



Rare Island Spider *Araneus angulatus*
Photo Colin Pope

ODONATA RECORDS FOR 2006

J M Cheverton

Fewer observers rendered reports than in most years making comparisons of annual totals for individual species a little difficult. However, for most damselfly species it was a disappointing year. The exceptions were *Calopteryx virgo*, the Beautiful Damselfly, with the largest number logged since recording commenced in 1978, and *Calopteryx splendens*, the Banded Damselfly, that had the best year since 2000. Additionally, there was a welcome increase in the number recorded of *Erythromma najas*, the Red-eyed Damselfly, a recent addition to the Island's list.

Most species of dragonflies were recorded in large numbers, the exceptions being *Aeshna cyanea*, the Southern Hawker, and *Libellula depressa*, the Broad-bodied Chaser, which were either missed by observers or had a particularly poor year. Both *Aeshna mixta*, the Migrant Hawker, and *Orthetrum coerulescens*, the Keeled Skimmer, were noted in the highest numbers since systematic recording began while exceptional numbers of the usually scarce migrant *Sympetrum fonscolombii*, the Red-veined Darter, were seen. Another scarce migrant *Sympetrum flaveolum*, the Yellow-winged Darter, was also seen, albeit singly.

Systematic List

Calopteryx virgo (Beautiful Demoiselle)

The total number recorded this year was 174, the largest since the first were recorded in 1989. Most were seen at "Wild Tracts", Shalfleet (SZ4189), the first on 8th June (VG) and the last on 21st August (VG), but a few were recorded along the Caul Bourne between Shalfleet and Homestead Farm (SZ4188) and one stray male in a garden at Gurnard (SZ476954) on 16th July (DTB).

Calopteryx splendens (Banded Demoiselle)

The total number recorded was 285, the highest since 2001. The first was seen at Merstone Fishing Lake (SZ533838) on 23rd May (DD) and the last at Hale Manor Farm (SZ536841) on 22nd August (DD). An unusual sighting was that of a female flying along a main road at Bonchurch (SZ5778) on 17th July (DT).

Lestes sponsa (Emerald Damselfly)

The total number recorded was 54 with the first at Lessland (SZ545828) on 6th July (DD) and the last at Cridmore Bog pond (SZ499821) on 7th August (DD).

Platycnemis pennipes (White-legged Damselfly)

None have been reported since 1992.

Pyrrhosoma nymphula (Large Red Damselfly)

This species had a much better year with 226 recorded. The first were seen in a field at Parkhurst Forest (SZ470913) on 26th April (DD) and the last on a cliff ledge at Chale Bay (SZ4777) on 22nd July (DD).

Ischnura elegans (Blue-tailed Damselfly)

There was a return towards the ten-year average of 943 with a total of 867 recorded. The first was seen in a garden at Shanklin (SZ576810) on 7th May (JMC) and the last at Merstone Fishing Lake on 8th September (DD).

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Enallagma cyathigerum (Common Blue Damselfly)

This species remains widespread and common but the total seen was lower than last year with 3735 individuals reported, a reduction of 934, possibly due to fewer observers. The first, approximately 40, were seen at Hale Manor Farm (SZ540851) on 2nd June (DD) and the last at Thorness Marsh (SZ459932) on 21st September (DD).

Coenagrion pulchellum (Variable Damselfly)

None have been reported since 1997.

Coenagrion puella (Azure Damselfly)

The total number recorded was 1004, considerably less than the ten-year average of 1805 but possibly partly due to reduced observer coverage. The first was seen in woodland at Clamerkin (SZ438908) on 4th May (DD) and the last at Thorness Marsh (SZ459932) on 16th August (DD).

Erythromma viridulum (Small Red-eyed Damselfly)

After a record year in 2005 there was a low count of 705, a little less than the six-year average of 723. The first were seen at Brockley Barns, Alvington Manor Farm (SZ474887), on 30th June (DD) and the last at Merstone Fishing Lakes (SZ533838) on 8th September (DD).

Erythromma najas (Red-eyed Damselfly)

After the first sighting in 2001 this species continues to spread in larger numbers each year and it now seems unlikely that it was overlooked in the past. There were 104 sightings this year. The first were seen at Hale Manor Farm (SZ540851) on 2nd June (DD) and the last at the same locality on 21st August (DD).

Brachytron pratense (Hairy Dragonfly)

None were reported this year.

Aeshna juncea (Common Hawker)

None were reported this year

Aeshna grandis (Brown Hawker)

The only record this year was of one was seen in Nodes road at Northwood (SZ487941) on 28th July (MC).

Aeshna cyanea (Southern Hawker)

After recovering last year this species had another poor year with only 88 reported, well below the ten-year average of 124. The first was seen in a garden at Wroxall (SZ551802) on 25th June (DD) and the last in the same locality on 24th October (DD).

Aeshna mixta (Migrant Hawker)

A very good year with 355 individuals reported, the highest number since recording commenced in 1979. The first was seen in a garden at Wroxall (SZ551802) on 24th July (DD) and the last at St Helen's Millpond (SZ6388) on 29th October (JMC).

Anax imperator (Emperor Dragonfly)

A good year with a total of 187 recorded, well above the ten-year average of 168. The first was seen at Springwood Cemetery (SZ561837) on 5th June (MC) and the last, a male, at "Wild Tracts", Shalfleet (SZ4189) on 29th September (VG).

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Cordulegaster boltonii (Golden-ringed Dragonfly)

An excellent year with 101 recorded, almost as many as recorded in 2003, the survey year. The first were seen at "Wild Tracts" (SZ4189) on 9th June (VG) the last, a female, at Haseley Manor (SZ547857) on 28th August (AR).

Libellula depressa (Broad-bodied Chaser)

The number recorded was 73, not greatly different from last year and still below the 10-year average of 98. The first was seen in woodland at Clamerkin (SZ438908) on 4th May (DD) and the last at Hale Manor Farm (SZ539847) on 24th July (DD)..

Libellula quadrimaculata (Four-spotted Chaser)

Only one was recorded, at Haseley Manor (SZ547857) on 6th June (AR), well away from the usual locality.

Orthetrum coerulescens (Keeled Skimmer)

As a result of a further increase in the number of visits to the cliffs in the Chale Bay area, the 204 individuals recorded this year was the largest number seen since the colony was rediscovered by BJ Angell in 1983. The first, two males and seven females, were seen by the Walpen Chine foot-path (SZ4777) on 17th June (DTB, JMC) and the last (12) at Whale Chine cliffs (SZ467784) on 28th July (DD).

Orthetrum cancellatum (Black-tailed Skimmer)

Another good year with 459 individuals reported, the second highest number since 1978. The first was seen at Haseley Manor (SZ547857) on 6th June (DD) and the last at Holliers lower marsh (SZ552834) on 6th September (DD).

Sympetrum flaveolum (Yellow-winged Darter)

One of these scarce migrants was seen at Whitecliff Bay (SZ638859) on 19th July (DD). This was the seventh record since the first was recorded by the late Oliver Frazer in 1955.

Sympetrum fonscolombii (Red-veined Darter)

There was an astonishing total of 35 records of this scarce migrant. Three were seen at Meadow Farm reservoir (SZ544831) on 28th June (DD), 22 at Leycroft Farm reservoir (SZ452807) on 2nd July (DD) and 10 males in the same locality on 3rd July (KM).

Sympetrum striolatum (Common Darter)

The total number of 431 recorded this year was well below the 10-year average of 602. The first, a male in a garden at Gurnard (SZ476954) and a female at Ningwood Common (SZ3989), were seen on 4th May (DTB). This is the earliest date yet recorded on the Island for this species, the previous being 30th May in 2001. The last was recorded at Rofford Marsh (SZ3689) on 5th November (JMC).

Sympetrum sanguineum (Ruddy Darter)

A much better year with 148 individuals recorded. The first was one at Meadow Farm reservoir (SZ544831) on 28th June (DD) with four males at "Wild Tracts" (SZ416894) on the same day (VG). The exceptionally large number of 44 was counted at Bouldnor Forest (SZ380902) on 8th August (DD) and the last was seen at Thorness Marshes (SZ458936) on 21st September (DD).

ODONATA RECORDS FOR 2006

Observers

I thank the following observers who have contributed records, only a small number of which are shown above.

Dr D T Biggs (DTB)

Mr A J L Butler (AJLB)

Mrs E Butler (EB)

Mr M Cahill (MC)

Mr D Dana (DD)

Ms V Gwynn (VG)

Mr K Marston (KM)

Mr B Ransom (BR)

Dr. A Roberts (AR)

Mr D Tucker (DT)

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ISLE OF WIGHT BUTTERFLY RECORDS FOR 2006

Andy Butler

Species account.

NB. Many records come from transects which are obtained by a recorder walking the same set route through a site once a week from April to September. The number of each species seen on that route is recorded. An annual index is the sum total of all records for each individual species thus derived. Annual totals and annual indices are one and the same. First and last dates are given only where considered appropriate.

Small Skipper *Thymelicus sylvestris*

This species is probably under recorded in the Island but is widespread and found right across our area wherever its favoured habitat of tall grasses flourishes. Unimproved rough grassland, woodland clearings and the lower regions of chalk downs are all colonised by this insect. Peak emergence of this single generation butterfly occurs in July and although most colonies are usually fairly small individuals can occasionally be extremely numerous such as the sighting of over 200 at Lake on 9 July by DAB. The Small Skipper is expanding its range on a national basis probably due to climate change and as its life cycle is unaffected by summer droughts (the larvae hibernate immediately after hatching and are thus not reliant on food plant quality) it is coping well with changing conditions. It is not under any particular threat other than habitat loss and is almost certainly more numerous than records indicate. The annual index for the Whippingham Fields transect was 578 (JR), a new record high but the numbers at Parkhurst seem to be going against the trend and declining (JR). Transects at Newtown have shown an increase of 125% over the last five years (PLM). The first of this species was seen on the early date of 15 June at Coombe Bottom (NT) and the last were at Totland (SK-J) and Brading (DAB) on 4 August.

Essex Skipper *Thymelicus lineola*

There are very few records of Essex Skipper for the Island due to the difficulty of identification, as it is almost impossible to tell it apart from Small Skipper without netting the insect first and many observers do not do this. However, in the last few years this butterfly has been positively identified at a number of sites throughout the Island and is increasing its range. The first main colony was discovered in 2001 in the Shalcombe/Wellow Down area and since then 6 more sites have been found including Branstone Cross near Sandown, Redcliff, Atherfield, Bembridge Marsh and Wheelers Bay. Nationally this butterfly is expanding its range more than any other and this is obviously happening on the Island. The first was seen at Wheelers Bay on 5 July (DT) and this was soon followed by a few records from the sites previously mentioned.

Large Skipper *Ochlodes faunus*

Another widespread skipper but not nearly so numerous as the Small Skipper. Favouring, as it does, rough grassland, scrubby areas, sheltered sea cliffs, road sides and woodland the expectation would be that this species should be thriving but records show that this is not so. There is no clear reason why this is and most recorders are in fact reporting a slow but steady decline in the numbers of this insect. The only real exception comes from the Newtown transects where PLM has noticed a small increase over the last 5 years. The Coombe Bottom and Bonchurch Down transects recorded only single figure annual totals for the year (NT). JR noted what he calls a 'continuous rapid decline' at Parkhurst Forest and only an average year at Whippingham Fields where he also recorded the first of the year on 27 May. The last was seen by DAB on the 19 August at Brading Quarries. Quite clearly this is a species that was once very abundant and has now reached a stage of being just common and the situation is slowly getting worse by the year.

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Dingy Skipper *Erynnis tages*

Although this skipper is widespread throughout Britain and Ireland its strongholds are in the south of England most notably Hampshire, Wiltshire, Surrey and Sussex and it would be assumed that the Isle of Wight would similarly have many thriving colonies but this is not the case and appears never to have been so. With a few exceptions numbers in the Island have always been recorded in low, normally single figures and the situation locally is definitely one of decline much as is happening nationally. This butterfly's larval food plant is usually Common Bird's-foot-trefoil *Lotus corniculatus* or Horseshoe Vetch *Hippocrepis comosa* both of which are found growing abundantly in the Island and its favoured habitats are chalk downland, woodland rides, coastal cliffs and undercliffs and waste ground of which there is no shortage right across our area. There appears to be no specific reason why this butterfly should be losing ground so rapidly but the few records sent in for 2006 only go to confirm a decline. The first seen this year was at Castle Cove near Steephill on 10 May (AW); a total of only 17 were seen by DAB all year and JR reported only 1 on transect at Whippingham Fields. The most seen at any one time was 8 on Brook Down on 10 June (PC) which also is the last record.

Grizzled Skipper *Pyrgus malvae*

The principal larval foodplants of this skipper are usually members of the Rosaceae such as Wild Strawberry *Fragaria vesca*, Agrimony *Agrimonia eupatoria* and Creeping Cinquefoil *Potentilla reptans*. These plants are all widespread across the Island and the distribution of this skipper thus follows suit but usually in low numbers. Downland and woodland rides are where it is found most commonly but it does seem to be very slowly declining. JR reports that it is now lost from Whippingham Fields and only 6 were seen in the Parkhurst NW transect in 2006 compared with 83 in 2000. The vast majority of records came from north of the central ridge and a sighting in the South Wight area is unusual; this year one was seen on the Bonchurch Down transect on 29 June (NT). The only high count came from Monkham Copse with 26 on 14 May (CD) an unusual occurrence. The first seen this year was on Afton Down on 22 April (SK-J).

Clouded Yellow *Colias croceus*

Up to less than a decade ago, a number of years could go by without any Clouded Yellow being recorded at all but now there are at least a few seen every year and, with more frequency, good numbers recorded in most years. 2006 will go down as an excellent year with some very high totals and the butterfly observed right across the Island. A wide range of leguminous plants are used as larval food plants and if this predominantly migrant butterfly reaches our shores early in the year and breeds, then the migrant numbers occurring later in the summer are augmented by this resultant emergence, which is what occurred this year. The first record was on 16 April at St Cathelines Point (DT) followed by a scattering of sightings from coastal sites throughout early May and into June. By the middle of July numbers increased dramatically and this was due to local emergence as well as continuing cross channel migration. To illustrate this point, a 40 acre field in Brighstone sparsely sown with Rye Grass *Lolium sp* and with White Clover *Trifolium repens* under, had Clouded Yellow recorded in it in low numbers in the Spring but in the last weeks of July was full of the emerging progeny of this initial colonisation. On 20 July A&EB recorded a minimum of 200 at any one time in the field and these in turn were pairing and laying eggs. There would doubtless have been further examples at other suitable sites throughout this period. The fine weather through the autumn also saw local emergence as well as continuing immigration. DD reported Clouded Yellow at sites along the coast up to 14 October and there were many records right into November with the last one at Wheelers Bay on 28 November (A&EB). There were just a few records of the pale female form 'helice'. Although it is almost certain that this butterfly now overwinters in the Island in the larval stage, there is still no definite proof.

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Brimstone *Gonepteryx rhamni*

Alder Buckthorn *Frangula alnus* is the principal larval foodplant for this butterfly and as this plant is fairly scarce on the Island it could be then assumed that the butterfly would be quite rare here but the contrary is true and it is, in fact, well distributed through the Island. Surprisingly, it is often recorded along the coastal strip in the South Wight area thus showing its ability to move well away from its foodplant range. The first sighting in 2006 was at Brading on 13 March (DAB) followed by one on 19 March at Parkhurst (KM). JR recorded a total of 303 from all his Parkhurst transects and commented that this was just an average year. Similarly VG recorded an average year at Shalfleet as did DAB at Brading. The last of the year was at Shalfleet on 28 November (VG). This is a butterfly that appears to have a stable population and it is worth noting that it is one of the easiest to help as far as conservation measures are concerned. The answer is just plant a few Alder Buckthorn in any suitable area and the Brimstone will seek them out.

Large White *Pieris brassicae*

This abundant migrant and resident had a typical year with small numbers recorded early on and the usual increase in mid-summer which was of record proportions at some sites. At Whippingham Fields all previous records were broken with an annual index of 506 (JR), DAB reported record numbers at Brighthorne in the summer but VG commented that the population at Shalfleet was only average but stable, relatively unchanged over the last 15 years. The first Large White was seen at Parkhurst on 22 April (JR) and the last was seen flying south out to sea off Ventnor on 9 November, a very late date (A&EB). An unusual occurrence this year was the sighting of a Large White flying round the interior of the Iceland store at Ryde on 24 February (Pauline Peach).

Small White *Pieris rapae*

First recorded at Wheelers Bay on 12 April (DH) this butterfly had mixed fortunes in 2006. DAB reported an excellent year at Brading boosted by a large influx on 15 July giving numbers of over 100 and VG noted a good year at Shalfleet but found many parasitised larvae. A very slow start at Whippingham Fields eventually resulted in a record annual index of 441 but Parkhurst and Woodhouse Copse transects were only average (all JR). The last of the year was at Afton Down on 18 September (SK-J).

Green-veined White *Pieris napi*

Most recorders considered that this butterfly had a poor year or at the best 'average'. The only exception was at Newtown where PLM recorded a large increase in numbers; in fact over the last 5 years this insect has been increasing there every year with 2006 the best so far. The first was seen at Totland on 18 April (SK-J) and the last at Barton Manor on 3 October (DTB). This is a much overlooked species and probably under-recorded but the trend seems to be one of a very slow decline. It is a resident, not migratory, and found right across the Island in a variety of habitats.

Orange Tip *Anthocharis cardamines*

Although nationally the trend for this species is one of expansion and paradoxically perhaps a very slow decline, here in the Island it is definitely not doing so well. JR reported one of the worst years ever at Whippingham Fields, Woodhouse Copse and Parkhurst Forest, DAB had an average year at Brading and VG reported a poor year at Shalfleet. PLM commented at Newtown that 2006 was not particularly good and the 5 year average was showing a gradual decrease. These observations are echoed by most of the other recorders. The reason for the decline is, as usual, not clear but the poor spring weather experienced over the last few years may not have helped. Although the main larval foodplant is usually Cuckooflower *Cardamine pratensis* which is not a particularly common

IOW BUTTERFLY RECORDS 2006

flower on the Island it has been noted that this butterfly is making more and more use of Garlic Mustard *Alliaria petiolata* of which there is plenty, especially alongside roadside verges, so the cutting time of these verges is significant. The first record for 2006 was on 17 April at Bonchurch (DT) and, going against the trend, it is encouraging to report an annual total of 50 in a garden at Wheelers Bay between 18 April and 12 June (A&EB).

Green Hairstreak *Callophrys rubi*

Very few records of this much over looked species are received so it is not easy to judge its status on the Island. On some sites 'average' sums up 2006 but in Whippingham Fields JR reported a record year with 14 seen up to 11 June and a late single one month later on the 14 July. A few single figure records came in from the chalk downlands much as would be expected. However DAB who noted a decrease at Brading Down. The first was seen on High Down on 27 April(SK-J).

Brown Hairstreak *Thecla betulae*

The last confirmed records for the Island were in the 1960s & 1970s but there have been a few sightings since but with no definite proof of identification. In 2004 Jill Mears recorded an adult at Coombe Bottom, Ventnor and in 2006 another adult was seen in the Porchfield area on 28 September (BA). This still did not amount to proof positive however, as no photographs were taken. This winter (2006/7) PLM and BA have both discovered the eggs of this species in the Newtown and Porchfield area. Photographs prove their identification as correct so we now know this butterfly is still extant in the Island.

Purple Hairstreak *Neozephyrus quercus*

This is yet another under recorded butterfly; it is found almost exclusively on Oak trees *Quercus sp* and usually inhabiting the crown of the tree where it is therefore quite difficult to survey. Most observers report only low numbers of this species and it is quite probable that this butterfly is slowly declining in the Island but this is impossible to confirm. JR reported a reasonably good year at Whippingham Fields with a total of 58 seen up to the 25 August but a disastrous year at Woodhouse Copse with a total of only 8 and a poor to average year at Parkhurst Forest with only 41 sightings. PLM had the only good news with a small increase recorded over the last 5 years at Newtown but 2006 was not the best year. An unusual sighting of 5 on Bramble flowers *Rubus sp* at Clamerkin Farm on 15 July (BR) is out of the ordinary.

White-Letter Hairstreak *Satyrium w-album*

Relying exclusively on Elm *Ulmus sp* as its larval foodplant this butterfly has therefore had problems surviving due to the spread of Dutch Elm Disease. Adapting to the changing conditions of loss of mature Elm and the emergence of thousands of Elm suckers this species has seen its population density fluctuate markedly. From the few records sent in for 2006 the general impression is that the butterfly is fairly wide- spread where the food plant is available but numbers are low. The White-Letter Hairstreak could also be expanding its range in the Island with reports from new sites but this could also be interpreted as increased observer coverage. The first of the year was a newly emerged specimen in a garden at Wheelers Bay on the 15 July and 2 in Bonchurch Landslip on the same day (both A&EB). DT recorded the insect in his garden at Bonchurch in July and also around Bonchurch Pond. VG noted that Elm suckers at her site at Shalfleet were dying off when about 2 metres high or less, a worrying observation. In the north of the Island at Newtown PLM recorded a possible slight increase over the last 5 years. A previously unknown colony was found on the lower slopes of Tennyson Down by CD where she recorded 5 adults on the 8 July and 3 on the 16 July. The difficulty of actually seeing this particular butterfly and confirming its identification makes it extremely difficult to confirm its true status in the Island.

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Small Copper *Lycaena phlaeas*

This conspicuous little butterfly is found right across our area in a variety of habitats ranging from chalk downland to heathland, coastal undercliffs, woodland, gardens and churchyards. 2006 can be deemed a good year for this species with some record numbers being logged. JW had an unsurpassed 633 for the annual total at Whippingham Fields but conversely a very poor count of only 45 at Parkhurst. It was an excellent year at Shalfleet (VG) and likewise at Bonchurch Down (NT). Some recorders commented that numbers were just average but taken overall most counts were higher than usual. The first of the year were at Osborne on the 5 May (DTB) and Bonchurch Down on the same date (DD). The last was at Whippingham on 29 October (JR).

Small Blue *Cupido minimus*

Not many records were received for this species so it is impossible to judge how it fared during the year. The first to be seen was on 11 May at Afton Down (SK-J) and Compton Down on the same date (DH). There were then a few records from this latter site plus 2 on 4 June at Mountjoy Cemetery and 2 at Brook Quarry on 10 June (both KM). The last report was a single from Afton Down on 14 July (SK-J).

Brown Argus *Aricia agestis*

First seen on Afton Down on 12 May (SK-J) the Brown Argus went on to be recorded as having an above average year from most of its usual locations. DAB reported very good numbers from woodland rides in Brighstone Forest eg. over 30 on 25 July and JR noted that although the first generation consisted of only 6 individuals at Whippingham Fields the second was excellent to give a record annual total of 192 compared with 139 in 2005. PLM has noticed an increase at Newtown over the last 5 years with 2006 being the best so far with a total of 34 and the butterfly was also seen in Bonchurch Landslip (DT). The general trend is of increasing expansion especially in woodland. The last record was from Coombe Bottom on 25 September (NT).

Common Blue *Polyommatus icarus*

The hot dry summer weather that appears to be a feature of the way our climate is changing now, suits this butterfly admirably but there is a danger that prolonged and very hot periods may cause the principal larval foodplant, Common Bird's-foot-trefoil *Lotus corniculatus* to shrivel and die prematurely, thus depriving the larvae of food at a crucial time. This could possibly happen in the future. Most recorders have noted record numbers in 2006, for example JR had an annual index of 938 for the Whippingham Fields transect and DAB reported increased numbers at Brading Down with best day counts of 41 on 3 June and 86 on 1 August. This is a common butterfly and 2006 was an excellent year for it. The first was seen in Bonchurch Landslip on 10 May (DH) and the last at Wheelers Bay on 3 October A&EB).

Chalkhill Blue *Polyommatus coridon*

Brading Down is now far and away the most productive recorded site for this butterfly in the Island. DAB reported a staggering index of 4612 for his transect on the down with a highest day count of 1274 on 4 August; nowhere else comes anywhere near these numbers. Annual totals for Bonchurch Down were 157, Coombe Bottom 378 and Mottistone Down 457 (all NT). At Whippingham Fields JR had a total of 16 which was the highest number he had recorded at this location. The first record of the year was on 14 July at Brading (DAB) and the last on 30 September at Afton Down (SK-J).

Adonis Blue *Polyommatus bellargus*

The last few years have seen this butterfly expand its range quite dramatically and to do this it has

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undergone a fundamental change in its behaviour. Long known to be an extremely sedentary species and unable to cross even quite low barriers such as hedges or sparse woodland, it has in recent years changed its habits and has been recorded many kilometres from known core sites. Small numbers have even been noted below the southern coastal cliffs on the Island such as at Wheelers Bay and near Steephill Cove. As this butterfly is a chalk downland specialist and its larval food-plant confined to only one species, Horseshoe Vetch *Hippocrepis comosa* it is surprising to see this rapid expansion. Some sites have been re-colonised due to sympathetic management regimes and this is no doubt helping as is also the resurgence in Rabbit *Oryctolagus cuniculus* numbers as they keep the turf short, another requirement. On Brading Down where the Adonis has returned after a long absence DAB reports a slow rise every year and on Bonchurch Down the transect annual index was the best year ever at 507 (NT). Summing up, this butterfly as at 2006, is progressing very well, consolidating core sites and expanding into suitable new territory. The first was seen at Brading Down on 28 May (DAB) and the last at Afton Down on 7 September (SK-J),

Holly Blue *Celastrina argiolus*

This is the first blue butterfly to emerge each year so a sighting at Newport Harbour on 29 March (KM) although not unusual is still quite early for this year due to the prolonged cold spells experienced in February and March. This species is found right across the Island and is able to make use of many different habitats especially gardens and many records are thus from these. 2006 was a year of average numbers recorded but with a few high counts such as a second generation total at Parkhurst of 145 being the best ever (JR). There must have been a third generation this year instead of the usual two as records came in from late in the year, the last being on 1 November at Gurnard (DTB).

Duke of Burgundy *Hamearis lucina*

Only one record of 2 adults was received this year from Monkham Copse on 14 May (CD). This is a declining species nationally and the past twenty years have seen this trend mirrored in the Island. Many colonies are now extinct and the small site at Monkham holds only very low numbers of this butterfly. There is possibly a colony still extant on Brook Down but at the moment its location is unknown but occasional sightings of single adults may mean it still survives. There is a management plan for the Monkham site which if ever put into operation may help this very vulnerable butterfly to continue and increase.

White Admiral *Limenitis camilla*

After an excellent year in 2005 this butterfly went on to a repeat performance in 2006. Record numbers were seen at many sites and it is likely that this is another species benefiting from the changes in climate that are experienced now plus sympathetic management in woodlands by conservation bodies. In Parkhurst Forest JR reported that 'he had never seen so many and with a peak of 142 on 2 June they were virtually the commonest butterfly in the Forest'. An annual count of 578 up to 6 August made this the best year ever at this site. PLM echoed this at Newtown where he has observed a large increase over the last five years and with an annual count of 122, 2006 was the best year yet. Due to the hot summer and autumn it is no surprise that a number of second generation White Admirals were seen; 1 in Locks Farm on 13 September (BA), 1 in Walters Copse on 15 September (PLM), 1 in Parkhurst Forest on 15th Sept (DD), 1 in Wallishill Copse (Kings Quay) on 17 Sept (DD) and the last of the year on High Down on 25 September (CD). The first of the year was at Shalfleet on 18 June (VG).

Red Admiral *Vanessa atalanta*

The first record this year was of 1 at St Lawrence on 18 January (Sylvia McInnes). After this came a few sporadic sightings until May but once into July the butterfly was seen all over the Island in

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quite reasonable numbers. During August counts of 10+ were quite common but the autumn eventually produced spectacular numbers. These would have been the progeny of spring migrants and increasingly, overwintering residents. The numbers are boosted all through the year by cross-channel migrants as this butterfly is still predominantly a migrant species. On the 16 September, for example, a steady influx of Red Admirals was seen coming in off the sea at Ventnor (A&EB). In October, November and December the butterfly was seen in huge numbers usually on Ivy (*Hedera helix*) all over the Island; the records are too numerous to enumerate with counts of 100+ commonplace.

Painted Lady *Vanessa cardui*

After the poor results last year (2005) this year proved completely the opposite. Of course, this is what would be expected of this purely migratory butterfly, a mixture of good years and bad depending on conditions in North Africa whence it originates. There is however, evidence that in recent years adults have overwintered in Britain but only in low numbers. The first was seen at Wheelers Bay on 19 April (A&EB) and then followed by low numbers through May and early June. As this insect can complete its life cycle in as little as one month these early arrivals can quickly give rise to good numbers in summer and autumn. The Parkhurst Forest transects gave the second best year ever with an annual total of 168 but Whippingham Fields had a record count of 210, being the highest count since the transect started (JR). Along the south coast counts of over 30 on most days through July and August were commonplace and the last of the year were seen at Ventnor on 2 November (A&EB).

Small Tortoiseshell *Aglais urticae*

The decline of this butterfly shows no sign of abating and once more only a handful of records were received. DAB commented in 2005 that things were so bad surely they could only get better but as he says in 2006 'they just got worse'. At Whippingham Fields JR had the worst year yet with an annual total of 51 and he also remarked that no larvae were observed on any Nettle *Urtica dioica* beds and the few larvae he did find elsewhere were all parasitised by *Sturmia bella* which he thinks is the primary cause of the decline. BR similarly said that this was his worst year ever. The Island population of this butterfly is now very low and in an extremely vulnerable state.

Peacock *Inachis io*

As this butterfly overwinters in the adult stage it is usual for a few to be seen very early in the year if the weather is suitable. This year no early sightings were reported and it was not until 15 March that one was seen at Castlehaven (KM) then followed by a few records in April. JR noted very few at Woodhouse Copse, a downward trend that started in 2002. His annual index for Whippingham Fields was 80 which was about average but at Parkhurst Forest numbers were below average with a total of 234. DAB considered it wasn't a bad year at Brading Down with a best day count of 24 on 28 July. At Shalfleet a pristine specimen was seen on 20 October (VG). The last of the year was 1 at Yarmouth on 5 November (DTB).

Comma *Polygonia c-album*

Most observers commented that the Comma had an average year in 2006. The first emerged at Woodhouse Copse on 18 March (JR) and the transect annual index here was 129, about average. Whippingham Fields and Parkhurst Forest gave results similar to last year but at Newtown PLM recorded a large increase with his annual total of 93, three times higher than 2005. A very good report was of over 20 nectaring on Fleabane *Pulicaria dysenterica* in Walters Copse on 10 September (BA). This must have been a fine sight. The last report of the year was 1 at Shide on 20 October (DTB).

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Small Pearl-bordered Fritillary *Boloria selene*

No records were received for this butterfly in 2006. NB.this does not mean that it wasn't seen.

Pearl-bordered Fritillary *Boloria euphrosyne*

This butterfly is now confined to only one site in the Island in Parkhurst Forest. JR reported that he saw a total of 22 in the north east section, 4 in the south west and 1 in the north west making a disappointing total of 28. This species is in a very vulnerable position and probably cannot survive the continual decline in numbers due to the lack of an appropriate management regime. Unless something is done soon to rectify this it will be lost as an Island species.

Dark Green Fritillary *Argynnis aglaja*

Average to above average numbers were recorded along the West Wight Downs which are this species' stronghold. DAB had a high total day count of 207 on 27 July between Wellow Down and East Afton but most other observers recorded only single figures at most other sites eg. 4 on Tennyson Down on 8 July (CD) and 1 on transect at Coombe Bottom on 14 July (NT) and the annual index for the Mottistone Down transect was 28 (NT).

Silver-washed Fritillary *Argynnis paphia*

Our largest resident species, this spectacular butterfly is more widespread than would be commonly thought. An inhabitant of broad-leaved woodland, especially Oak *Quercus sp* and where its larval foodplant, Common Dog-violet *Viola riviniana* grows, it is confined almost exclusively to north of the central east-west chalk ridge. It is found from the area near Haven Street in the east and as far west as Yarmouth. The first record for 2006 was quite early with a single at Woodhouse Copse on 3 June (JR) and at this site the annual total of 19 was the highest recorded there ever. Parkhurst was above average with a total of 40 (JR) and the Newtown transects gave the best ever total of 49 (PLM). The butterfly was also recorded from Rowlands Wood with 1 on the 18 July (DD), 10 at Bouldnor Copse on 8 August (DD), Locks Copse, Porchfield (BA) and many sightings from Walters Copse at Newtown (mo). There were a few records of the female form *valesina* from most sites.

Glanville fritillary *Melitaea cinxia*

The first Glanville emerged at Wheelers Bay on 14 May (A&EB), later than the last few years which was probably due to the cold weather during the spring. The butterfly had a good year at most sites with a few exceptional day counts such as 202 at Chilton Chine on 15 June (CD) and 103 at Wheelers Bay on 6 June (A&EB). DAB noted 3 in Rylstone Gardens at Shanklin on 3 June and a single at Redcliff on 13 June showing that this site is still supporting the butterfly but in very low numbers. At Whippingham JR saw 4 on 17 June, a similar sighting to 2001 perhaps indicating a colony somewhere near by. Larval web counts carried out by IWNHAS every year since 1982 show the usual fluctuations but no really serious overall declines. The last was again at Wheelers Bay on 3 July (A&EB).

Speckled Wood *Pararge aegeria*

This shade loving species had an average year in the Island with no exceptional counts although 24 on Brading Down on 28 July (DAB) was above the norm. It is probable that this is another species that is under-recorded as few sightings are sent in. The first was at Clamerkin on 22 April (DT). At Whippingham Fields JR had an annual index of 213 which was about average but Parkhurst Forest was down at 199, much in line with a continuing decline at this location (JR). At Newtown PLM recorded the highest number for ten years with 257 as the annual total, which is encouraging. The last was at Shalfleet on 28 October (VG).

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Wall Brown *Lasiommata megera*

Although the Wall was seen right across the Island in a number of differing habitats the numbers recorded were only very low. This is a rapidly declining species. It has virtually vanished from Hampshire and the Island was thought to be its stronghold but apparently no longer. The undoubted strongest population has been at Brading Quarries with quite high returns on the transect there in previous years but this year even this site was well down with an annual index of 37 compared to 78 in 2005 (DAB). PLM's transects at Newtown all showed a decline and JR reported the worst year ever at Woodhouse Copse and Whippingham Fields. It is thought that this butterfly is very susceptible to temperature fluctuations, especially in the summer, and it may be that it will just as rapidly increase if the summer weather continues as it has in recent years. This can only be speculation; constant monitoring will show what is happening over the next few years. The first Wall was seen at Brighstone on 17 May (DTB) and the last, a third generation at Shalfleet on 8 October (VG).

Marbled White *Melanargia galathea*

A good to average year was the general consensus for this butterfly in 2006. At Whippingham Fields a peak of 1260 on 2 July and an annual index of 2492 proved to be the second best year ever (JR) but, in contrast, the Parkhurst Forest transect was well below average with a total of only 548 (JR). DAB recorded a good year at Brading with a best day count of 96 on 8 July. He also saw over 100 at Culver Cliff on 15 July. This butterfly continues to be widespread and reasonably abundant although some of the downland colonies appear to be decreasing slowly. The first of the year was a coastal sighting at Wheelers Bay on 23 June (A&EB) and the last on 11 August on the Coombe Bottom transect at Ventnor (NT).

Grayling *Hipparchia semele*

This is a rather inconspicuous species and probably overlooked and thus under-recorded. In spite of this quite a few records were received this year showing a fairly widespread and healthy population in its suitable habitat. The highest numbers came from Mottistone Down where the transect annual index was 58 with a best day count of 15 on 12 July (NT). DAB reported single numbers along the Tennyson Trail at Brightstone nectaring on Marjoram *Origanum vulgare*. It was also recorded on the South Wight Downs in low numbers (NT) and at Bleak Down on 3 July which was the first record of the year (DD) and also 4 on spoil next to the Wilderness Farm reservoir on 7 August (DD). On the same date came the highest day count of any site with 38 at Bleak Down (DD). An odd sighting was of a single adult in a garden at Bonchurch on 5 August (DT).

Gatekeeper *Pyronia tithonus*

With a few exceptions most observers considered this an average year for this butterfly. At Woodhouse Copse however, JR reported the worst year ever and at Whippingham Fields a below average year and the Parkhurst Forest transects were down by a half with an annual count of 990. Conversely, the Newtown transects gave the highest totals yet over a ten year period with 817 (PLM). DAB was of the opinion that numbers were slightly down at most sites. This is a common butterfly and numbers will fluctuate year to year. Also not every observer bothers to record it. The first was seen at Whippingham Fields on 25 June (JR) and the last at Clamerkin on 13 September (BA).

Meadow Brown *Maniola jurtina*

This is one of our commonest butterflies and often seen in almost uncountable numbers. It also inhabits a variety of different habitats from open grassland to coastal cliffs or urban parks and gardens. 2006 was considered by many to be another average year. JR commented that with an annual index of 8249 Whippingham Fields was above average. At Woodhouse Copse he recorded an

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annual total of 2150 which was the highest ever at this site. At Newtown PLM also had a record total of 1926, the highest of a ten year period. The first was seen at Whippingham on 3 June and the last on 8 October at the same site (both JR).

Ringlet *Aphantopus hyperantus*

The stronghold for this butterfly is, without doubt, Parkhurst Forest where excellent numbers are usually recorded. This year, although slightly down on 2005, the site still produced a total annual count of 1773 (JR); no other location can match this. Coombe Bottom at Ventnor had an annual index of 59 and Bonchurch Down of 9 (both NT), showing the marked difference between an area of downland with a small amount of suitable woodland and one without. Odd reports came in from other areas which give the impression of a general trend towards slight expansion.

Small Heath *Coenonympha pamphilus*

Overall this appears to be a species that is slowly declining, both nationally and locally. The reasons for this are not clear and may be climate related as the Island has large areas of suitable habitat for this butterfly and management regimes in many of them that are sympathetic to it. However, there are still good numbers recorded, such as at Whippingham Fields where the annual index for 2006 was an all time record of 1241 (JR), an astonishing total. At Mottistone Down the highest day count was 21 on 28 June and an annual total of 98 (NT). In the South Wight the total for the Coombe Bottom transect was 75 (NT) and for Brading Quarries 123 (DAB). At Shalfleet, where VG manages a traditional hay meadow, numbers have increased but are still only in single figures. The first of the year was seen at Whippingham Fields on 18 May and the last on 24 September at the same site (both JR). In spite of this possible slow decline 2006 was not a bad year for this species in the Island.

Scarce Immigrants

Camberwell Beauty *Nymphalis antiopa*

One was seen perched on the windscreen of a car parked at the Bargeman's Rest at Newport Quay on 22 August (Tony Gutteridge).

Monarch *Danaus plexippus*

One was seen flying across Wheelers Bay car park on the afternoon of 7 October (PC) and what must have been the same one was seen the next day in a garden at Wheelers Bay (A&EB, PC, AW).

Discussion

It will be seen from the species account that the numbers of some butterflies are decreasing quite rapidly, some are stable and some are increasing. This at first sight, may seem to be stating the obvious and is what should be expected to be in line with the situation nationally, but the underlying trend is more subtle and more difficult to determine. The Island has a high percentage of its natural areas owned and managed by a number of conservation organisations, actively working to enhance the wildlife potential of these sites, so lack of appropriate management is not too much of a problem. Loss of habitat, which is probably the greatest threat to most species nationally, is again not noticeably the cause of observed declines for the same reasons. We now come to climate change, arguably, a natural course of events probably exacerbated artificially. The changing global climate has an effect on the weather systems experienced locally so 2006, for instance, has been recorded as the hottest year ever in Britain and with the highest July temperatures ever recorded; severe winters do not now occur. What effect does this have on our native flora and fauna? The short answer is that this is unknown as events have happened in such a short time span and short term statistics will not give a true picture. Only long term recording and monitoring will ever give

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an idea of causes and effects. Solutions are possibly out of the control of local and national bodies but it is acknowledged that this statement could be a rather contentious one. It is quite likely that the Island will lose some species of butterfly and gain others. To speculate: Long-tailed Blue *Lampides boeticus* and Large Tortoiseshell *Nymphalis polychloros* could become residents, Essex Skipper *Thymelicus lineola* and Adonis Blue *Polyommatus bellargus* will continue to expand their range and we could lose Pearl-bordered Fritillary *Boloria euphrosyne*, Duke of Burgundy *Hamearis lucina* and some of the Skippers (the first two species due to lack of management). We live in interesting times.

Observers.

BJ Angell (BA), D Britton (DAB), A&E Butler (A&EB), Dr DT Biggs (DTB), P Cambell (PC)
D Dana (DD), C Dudley (CD), V Gwynn (VG), D Hammersley (DH), SA Knill-Jones (SK-J), K
Marston (KM), P Le Masurier (PLM), National Trust (NT), B Ransom (BR), J Rowell (JR), D
Tucker (DT), A Wright (AW).

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Site Grid References

| | | | |
|--------------------|-----------|--------------------|----------|
| Atherfield | SZ7945 | Mountjoy | SZ5987 |
| Barton Manor | SZ9451 | Newtown | SZ9042 |
| Bembridge Marsh | SZ8761 | Osborne | SZ5295 |
| Bleak Down | SZ5181 | Parkhurst Forest | SZ4790 |
| Bonchurch Landslip | SZ582788 | Redcliff | SZ6285 |
| Bouldnor | SZ3790 | Rowlands Wood | SZ5689 |
| Brading Down | SZ6086 | S.C.P | SZ4975 |
| Brighstone | SZ4283 | Shalcombe | SZ3985 |
| Brook Down | SZ3985 | Shalcombe Down | SZ3985 |
| Castle Cove | SZ552769 | Shalfleet | SZ8941 |
| Castle Haven | SZ508755 | Tennyson Down | SZ320854 |
| Chilton Chine | SZ409821 | Totland | SZ328860 |
| Clamerkin | SZ9043 | Walishill Copse | SZ541934 |
| Compton Down | SZ3790851 | Walter`s Copse | SZ431907 |
| Coombe Bottom | SZ5678 | West High Down | SZ318853 |
| Firestone Copse | SZ5591 | Wheelers Bay | SZ571776 |
| Lake | SZ5983 | Whippingham Fields | SZ9352 |
| Locks Copse | SZ8490 | Wilderness Farm | SZ503823 |
| Monkham | SZ4586 | Woodhouse Copse | SZ9352 |
| Mottistone Down | SZ405845 | Yarmouth | SZ9037 |

LEAF MINING ORGANISMS NOT PREVIOUSLY RECORDED ON THE IOW

DR. D.T. Biggs.

Since the publication of the last list of *Newly Found Leaf Miners* (Biggs, 2007) only three new species have been found, all flies, two AGROMYZIDS and one ANTHOMYIID,

DIPTERA:

AGROMYZIDAE

Liriomyza sonchi Hendel 1971_on Nipplewort, *Lapsana communis*.

On 13.8.2006 Bill Shepard and I were walking over Brighstone Down when we came across a plant of Nipplewort at SZ524284 which had two of its leaves very obviously mined. One leaf had five mines, the second had two. Each mine was an upper surface blotch, roughly rectangular, measuring 15 mm x 10 mm, and grey in appearance due to the larval feeding lines. Further examination later showed that the mines began with a short broad corridor which was later incorporated into the blotch and only discernable with difficulty. The black frass was rather sparse. This fly pupates externally and the larva mines between May and August in two generations. It is more often found on Sow-thistle *Sonchus spp.* In England it is considered to be widespread, at least in the south. It is known to be widespread and common in much of Europe, extending eastwards to Central Asia.

Phytomyza anemones Hering 1925_on Wood Anemone *Anemone nemorosa*

I found a leaf mine which I could not identify on 23.5.2006 in Briddlesford Copse SZ525490 on Wood Anemone. It was an apparent blotch mine measuring 15mm x 5mm, pale brown in colour, in the apex of a segment of a leaf. It was either deep upper-surface or full depth, with the larval feeding lines obvious, a larva present and with black washy frass. Hand lens observation revealed that the apparent blotch was in fact formed of a corridor mine with many close visceral turns forming a secondary blotch. I sent the mine to John Robbins who identified the cause of this mine for me. The larva is known to mine in May and the adult fly appears as a single generation at the end of April. It had previously been reported from Sussex and Gloucestershire, and is considered to be local only. In Europe it is described as local but not uncommon, in central and northern Europe and in Scandinavia .

ANTHOMYIIDAE

Pegomya hyoscyami Panzer 1809 *sensu stricto* on Thorn-apple *Datura stramonium*

Sue Blackwell found a large pale-brown upper-surface blotch mine on a leaf of Thorn-apple growing in Marvel Lane, Newport, SZ5011869 on 15.8.2006 Closer examination showed the blotch to measure 55mm x 15 to be almost completely confined between two adjacent veins and to contain very obvious washy greenish-black frass. An empty eggshell was visible on the upper surface of the leaf. This fly larva mines *Atropa*, *Hyoscyamus* and *Solanum* in Great Britain and other Solanaceous genera abroad. The larva mine between May and September in two generations and pupate externally. What is now considered *Pegomya hyoscyami* in the strict sense is one of four species which now make up the old *P.hyoscyami* complex. One of the other species is *P.betae* and there are previous Island records for this, a pest of Spinach and Beet.

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BATS (CHIROPTERA) - 2006

Colin R. Pope

A total of twelve different bat species were recorded in 2006, including the very rare migrant Part-coloured Bat. Nineteen house roosts were counted by bat group members and householders. Graham and Donna Street's bat hospital was kept busy throughout the year; they dealt with a total of 123 bats, one of the highest counts ever. Mist netting was again carried out by Ian Davidson-Watts, as part of an ongoing survey to investigate woodland bats on the Island, with particular reference to Bechstein's and Barbastelle bats. This year, the sites netted were Lock's Copse (Newtown), MOD woods at Newtown Ranges, Combley Great Wood, Bouldnor Copse, Rowborough Bottom (near Shorwell), Fort Victoria, Borthwood Copse, Parkhurst Forest and Brighstone Forest. Members of the Bat Group carried out surveys of the Quarr Abbey estate on behalf of the monks and also took part in the Bat Conservation Trust Bats & Roadside Mammals Survey for the second year running.

The following bat species were recorded in 2006:

Daubenton's Bat (*Myotis daubentonii*)

Recorded by bat detector at the Eight Bells pond at Carisbrooke (C&JP).

During the summer, a female was grounded in a shop front in Pyle Street, Newport and a male was grounded at Bembridge Airport (GS).

Whiskered Bat (*M. mystacinus*)

A maximum of 26 were counted from a long-established house roost in Pallance Road, Northwood on 8 June (ShC). Bats were netted at this roost this year and their identity confirmed as *Myotis mystacinus*.

Whiskered Bats were caught in mist nets set up in Locks Copse, Newtown on 25 May; a male at Fort Victoria on 8 August; an adult male and lactating female in Borthwood Copse on 9 August; and a male in Brighstone Forest on 11 August (IDW).

Seven, all considered to be Whiskered Bats, were treated at the bat hospital during the year, comprising four males and three females. They were from Freshwater, Fort Warden, Yarmouth, Arreton, Winford, Staplers and Hunnyhill in Newport (GS).

Natterer's Bat (*M. nattereri*)

Three in Shide tunnel hibernaculum on 15 January and four there (the most ever recorded) on 4 February (C&JP).

Up to three in bat boxes in trees at the site of Beauchamps, Niton (SC).

Individuals caught in mist nets comprised a male on 25 May at Locks Copse, Newtown; a non-lactating female in Hummet Wood, Porchfield on 30 May; one at Rowborough Bottom on 1 June; a male and a female in Parkhurst Forest on 13 July and a male in Parkhurst Forest on 14 July (IDW).

Three females were treated at the bat hospital during the year. They were from East Cowes, Alverstone Garden Village and Godshill (GS).

Bechstein's Bat (*M. bechsteinii*)

Mist netting and radiotracking again led to the discovery of further sites and maternity roosts for this species. Individuals were caught in mist nets set up in Locks Copse, Newtown on 25 May; Hummet Wood, Porchfield on 30 May; and a male and lactating female in Combley Great Wood

BATS (CHIROPTERA) - 2006

on 12 July. The female returned to a roost in Vicarage Copse, Briddlesford, from which 30 bats were counted out the following evening. A post-lactating female was tracked to trees behind East Ashey Farm on 6 August. A maternity tree roost was located in Bouldnor Copse; 11 bats were counted out on 8 August. A male was netted at Fort Victoria on 8 August. A maternity roost was located in woodland close to Burnt Wood; 55 bats were counted out on 31 May. A total of four males, mostly juveniles, were caught in locations in Brighstone Forest on 10 and 11 August (IDW).

A male in a bat box in trees at the site of Beauchamps, Niton on 17 November (SC).

A grounded male from Blackwater and a female from Fort Victoria were treated at the bat hospital during the year (GS).

Noctule (*Nyctalus noctula*)

This species is no longer frequently recorded. One was detected flying over Locks Copse on 25 May and one male was netted in Rowlands Wood on 5 August (IDW).

This year, a house roost at Havenstreet Station, regularly counted and believed to belong to Serotines, was investigated following a series of reports of grounded Noctule bats beneath the roost site. Netting confirmed that this roost was indeed a Noctule roost, not a Serotine roost as previously believed and referred to in earlier reports. A maximum of 54 bats were counted out on 6 July (C&JP). This roost presents something of a dilemma. Noctules are normally tree dwelling bats, so a maternity house roost was never previously suspected. The size of this colony is substantial and, at its peak, probably accounts for all the Noctule bats in the Havenstreet area. Several years ago, this roost was definitely a Serotine roost, suggesting that the Serotine bats may have been displaced.

Serotine (*Eptesicus serotinus*)

A maximum of 43 from the Meadow Cottage roost on 8 June (J&DG).

In Borthwood Copse on 9 August, six adult females and one juvenile male were caught in mist nets set across a main ride (IDW).

Four males were treated at the bat hospital during the year (GS).

Parti-coloured Bat (*Vespertilio murinus*)

A juvenile female at Freshwater Parish Hall in April was a remarkable find (GS). This comprises the eleventh British record for this migrant species, and the second Island record. Tony Hutson considered that this individual may well have overwintered here.

Pipistrelle (*Pipistrellus pipistrellus* / *P. pygmaeus*)

We are beginning to be able to separate these two sibling species and evidence is accumulating that *Pipistrellus pygmaeus* is by far the scarcest species, a pattern shown elsewhere in much of lowland Britain. Roadside bat surveys across the Island for the Bat Conservation Trust picked up 100 identified calls of the Common Pipistrelle (*Pipistrellus pipistrellus*) but only four calls of *Pipistrellus pygmaeus*.

Large maternity roosts are not common on the Island, but a few are known. A house roost at Hamstead had a maximum count of 97 on 29 July. However, this was substantially exceeded by a maximum count of 528 from a house in Hamstead Road, Cranmore on 9 July (C&JP, PS), making this one of the largest colonies in England.

The only confirmed maternity roost of *Pipistrellus pygmaeus*, a house in Quarr Road, Quarr had a maximum count of 62 on 13 August.

Pipistrelles are by far the commonest bats to be treated at the bat hospital. Sixty males, 27 females and 15 babies were treated during the year (GS).

BATS (CHIROPTERA) - 2006

Brown Long-eared Bat (*Plecotus auritus*)

One in Shide tunnel hibernaculum on 15 January (C&JP).

Regularly caught in mist netting sessions (IDW).

Five male and four female bats were treated at the bat hospital during the year (GS).

Grey Long-eared Bat (*P. austriacus*)

One juvenile was netted in Brighstone Forest on 10 August (IDW).

Five male and two females were treated at the bat hospital during the year. These were from Brad-
ing (2), Carisbrooke Castle (2), Little East Standen, Godshill and Alverstone (GS).

Barbastelle (*Barbastella barbastellus*)

Mist netting and radiotracking again led to the discovery of further sites and maternity roosts for this rare woodland species. A maternity roost was located in the north of Parkhurst Forest; at least 115 emerged from crevices in an oak limb on 15 July.

A male was caught in a mist net set up Robin Wood, Porchfield on 2 June. A non-lactating female caught in Burnt Wood on 31 May. Five females were caught in Rowborough Bottom on 1 June; four of these were pregnant. A male was netted in Bouldnor Copse on 7 August. One was identified by time expansion bat detector in Brighstone Forest on 11 August (IDW) and close to Quarr Abbey on 1 September (C&JP).

A female was grounded at Wroxall during the autumn (GS).

Acknowledgements

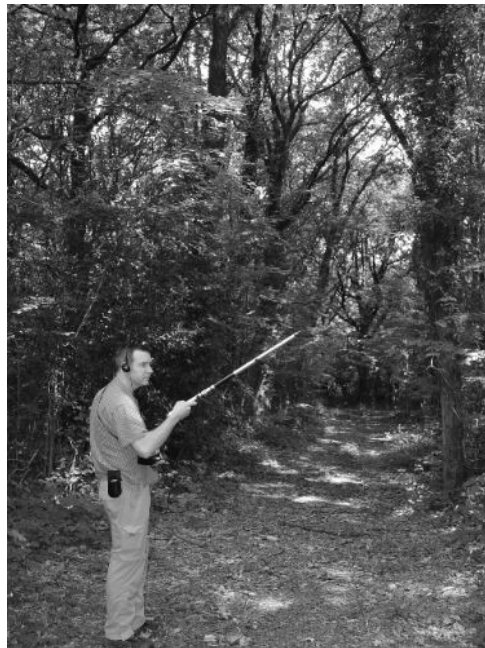
Kevin Batchelor, Neil Brown, Simon Colenutt (SC), Sheila Cooper (ShC), Ian Davidson-Watts (IDW), Carol Flux, Jill & Dave Green (J&DG), Margaret Jackson, Colin & Jillie Pope (C&JP), Paul Scott, Graham Street (GS). I am most grateful to Graham and Donna Street for details of bats treated at the bat hospital.

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BATS (CHIROPTERA) - 2006



A ringed Bechstein's Bat ready to be released.
Photo Colin Pope



Ian Davidson Watts radiotracking a Bechstein's Bat.
Photo Colin Pope

BATS (CHIROPTERA) - 2006



A juvenile female Parti-coloured Bat, photographed at the Bat Hospital in April, was the eleventh British record.

Photo Colin Pope



Natterer`s Bat, hibernating in Shide Tunnel

Photo Colin Pope



Pied Wagtail with coloured leg ring.
Photos Derek Hale

BIRD RINGING REPORT 2005 & 2006

Introduction

Bird ringing has both local and national importance. As well as the obvious use of providing information about migration routes and local dispersion, by analysing the national returns vitally important information about changes in populations and annual breeding success is obtained and published annually in *Ringling and Migration*.

Information is also gathered how birds are killed or die. The commonest cause of death reported to the British Trust for Ornithology (who runs the British ringing scheme) for instance is the domestic cat.

Birds can either be ringed as pulli in the nest or as adults. Adults can be caught in traps or in mist nets and are ringed with a metal ring on one leg. Each ring has an address and a number on it which identifies it as an individual. For some special studies coloured rings or flags are also attached to the legs (see below). Anyone finding a ringed bird or seeing a coloured ring on a live bird can either send the ring (preferred option) or the number and information to the British Museum (Natural History), London SW7, and they will receive information as to where and when that bird was ringed, together with information about the ringing scheme.

Bird ringing is a closely controlled activity and is carried out by highly trained and licensed people under the terms of the Wildlife and Countryside Act (1981). Anyone over 14 years old with a reasonable, but not extensive, knowledge of bird recognition can become a trainee, and after one to three years can progress to an intermediate licence and then on to a full licence after three to five further years. With the agreement of a licensed ringer a small number of visitors can also accompany ringing trips. On the Isle of Wight there are now three fully licensed ringers (one a trainer), one partial permit holder, and three trainees. Contact can be made through Dr Anthony Roberts 01983 865420 or the BTO 01842 750050.

Ringling Activities – Isle of Wight 2005

The long term study by James Gloyn of Barn Owls continues. Because of a very early breeding season and the pressure of work no barn owls were ringed during the year.

The major ringling site was the Haseley Reserve at Arreton (Map ref SZ 546856), where a total of 1718 birds were either ringed, retrapped (ringed or found within 5km of the ringling place) or controlled (ringed or found more than 5 km from the ringling place).

At Head Down, Niton, (Map ref SZ 505777) 73 birds were handled.

Ringling was also carried out at three SSSI sites with the permission of English Nature.

Attempts were made to catch waders near Wootton Creek with minimal success. The attempts were made on spring tides, and the curlew in particular left the foreshore before high tide. Two only were caught.

Further observations suggest that the curlew pre roost on the mud in front of a shingle bank, and further attempts will be made on a neap or intermediate tide when the birds will not be pushed off the area.

BIRD RINGING REPORT 2005 & 2006

At Palmer's Farm, Birds (especially acrocephalus warblers) were ringed in the reed bed and adjacent scrub with considerable success (see list). Four birds previously ringed were controlled, and one bird ringed there was found in Cowes.

On the Medina, two attempts were made to catch waders at night on spring tides. Three waders, and some other birds were caught. Previous reccies during the day had shown up to two hundred mixed waders present. No groups of waders were seen at night and it is apparent that the birds have a different strategy for the two high tides. The only way of making a useful sample would appear to on a noon tide on a grey foggy day or by cannon netting.

Ringling Activities – Isle of Wight 2006

Ringling was again carried out at the two main sites, The major ringling site was the Haseley Reserve at Arreton (Map ref SZ 546856), where a total of 2131 birds were trapped. At Head Down, Niton, (Map ref SZ 505777), 316 birds were handled.

This year there has been a European initiative to study the declining numbers of the Swallow *Hirundo rustica* and this has biased the numbers caught compared to previous years. The swallows (and sand martins) were trapped at their autumn pre roost site at Arreton before they moved into their roost, either in Maize fields or on occasions in willow scrub.

A new site at St Catherine's Down was reccied with the National Trust warden, and 54 autumn migrating birds birds were trapped and ringed.

It was intended to ring the Pied Wagtail *Motacilla alba yarelli* roost on Ryde Pier in 2006 but attempts were frustrated by the weather. It was however ringed on two occasions in 2007, with the assistance of 'The Island Line'. The aim was to establish the area from which these birds (some three to four hundred) gather, and whether these are Island birds only, or have a contribution from the mainland. As well as the standard metal ring these birds were also ringed with a yellow plastic ring on the other leg. This makes them easily visible by observers and reports have already been received from several sites on the Island. If you do see any of these birds we would be very grateful to receive details of place, date and which leg had the coloured ring, (see photographs) (Telephone 01983 865420 or 01983 731114). Next year the colour may be changed to give more information and then the colour will also be important.

Our thanks are due to the owners of all of these sites for permission to study the birds and to Derek Hale for the photographs.

Training

To become a fully qualified ringer takes a minimum of three years. The ringling scheme is looking for new recruits, particularly young people.

The basic requirements are:-

A reasonable knowledge of bird recognition – but you do not have to be an expert.

Be over 14 years old when you start as a trainee.

Have sufficient time to train. This is normally a commitment of half a day on average every ten days. The minimum time as a trainee is one year, and this can be longer if time is not available.

BIRD RINGING REPORT 2005 & 2006

Finding a trainer can be done through the ringing office at the British Trust for Ornithology from whom further information about the ringing scheme can be obtained (www.bto.org.uk or Tel 01842 750050)

What normally happens is that an interested person will go out with experienced ringers on three or four occasions to mutually try it out - for the trainer to ensure that the potential trainee has sufficient knowledge and dexterity, and before starting on a long apprenticeship, to make sure that both are compatible to each other.

A national ringing training course is to be held on the Island in September 2007.

Annual Numbers

The list below is the summary of the species and numbers ringed.

As large scale ringing has only recently returned to the Island, recoveries will take some years to build up. However the recoveries below are a start and there are already some very interesting results.

Recoveries 2005 and 2006

| Species | Ring No | Ringed | Date | Recovered | Date | How | Time days | km moved |
|-----------------|---------|------------------|----------|-------------|----------|-------------------|-----------|----------|
| Canada Goose | 5090042 | Haseley | 06 07 05 | Chillerton | 17 09 05 | Shot | 73 | 7 |
| Canada Goose | 5090046 | Haseley | 06 07 05 | Arreton | 14 02 06 | Dead | 188 | 0 |
| Mallard | GJ04402 | Haseley | 25 09 06 | Newport | 18 09 06 | Shot | 54 | 6 |
| Kestrel | ER96738 | Haseley | 06 08 04 | Wroxall | 10 09 06 | Car | 765 | 6 |
| Kestrel | ER96748 | Haseley | 09 10 05 | Hale Common | 25 11 06 | Building Released | 412 | 2 |
| Kingfisher | SA75366 | Haseley | 10 08 05 | Walthamstow | 06 01 06 | Dead | 149 | 132 |
| Swallow | V186185 | Awaiting details | | Haseley | 07 09 06 | Control | ? | ? |
| Wren | BVA031 | Haseley | 20 09 06 | Haseley | 22 12 06 | Kestrel | 93 | 0 |
| Dunnock | J119170 | Haseley | 20 06 03 | Haseley | 27 04 05 | Kestrel | 677 | 0 |
| Dunnock | J119355 | Haseley | 14 06 04 | Haseley | 15 07 05 | Kestrel | 396 | 0 |
| Blackbird | RC61707 | Alverstone | 20 06 03 | Wootton | 20 04 05 | Control | 670 | 8 |
| Blackbird | RC61708 | Alverstone | 01 05 03 | Wootton | 01 05 05 | Control | 693 | 8 |
| Reed Warbler | T813252 | Newport, Gwent | 09 08 05 | Haseley | 18 08 05 | Control | 9 | 155 |
| Reed Warbler | P283300 | Fareham, Hants | 24 07 02 | Wootton | 19 06 05 | Control | 1061 | 10 |
| Blackcap | T183437 | Flimby, Cumbria | 12 07 04 | Haseley | 24 09 04 | Control | 744 | 72 |
| Chiffchaff | ACV024 | Derbyshire | 27 06 04 | Haseley | 28 09 04 | Control | 93 | 305 |
| Long Tailed Tit | AXP048 | Haseley | 02 09 04 | Alverstone | 09 03 05 | Dead | 188 | 3 |
| Great Tit | J119162 | Haseley | 08 06 03 | Kent | 04 04 04 | Control | 301 | 195 |
| Chaffinch | H415472 | Haseley | 11 05 02 | Arreton | 27 03 05 | Hit Window | 1051 | 0 |
| Greenfinch | VN23362 | Haseley | 13 07 05 | Wootton | 08 08 05 | Control | 26 | 8 |
| Greenfinch | VN23366 | Wootton | 31 08 05 | Cowes | 08 10 05 | Cat | 38 | 7 |

A control is a bird caught and released by a ringer and has moved more than 5km.

BIRD RINGING REPORT 2005 & 2006

Isle of Wight Totals Summary 2005

| | Full | Grown | Pulli | Retraps/ Recoveries | Total |
|--------------------------|------|-------|-------|------------------------|-------|
| Greater Canada Goose | | 1 | 12 | 0 | 13 |
| Tufted Duck | | 1 | 0 | 0 | 1 |
| Sparrowhawk | | 5 | 0 | 0 | 5 |
| Kestrel | | 5 | 0 | 0 | 5 |
| Moorhen | | 15 | 0 | 0 | 15 |
| Lapwing | | 0 | 1 | 0 | 1 |
| Curlew | | 2 | 0 | 0 | 2 |
| Woodpigeon | | 7 | 0 | 0 | 7 |
| Little Owl | | 0 | 0 | 4 | 4 |
| Swift | | 5 | 0 | 0 | 5 |
| Kingfisher | | 11 | 0 | 5 | 16 |
| Green Woodpecker | | 3 | 0 | 1 | 4 |
| Great Spotted Woodpecker | | 4 | 0 | 0 | 4 |
| Sand Martin | | 10 | 0 | 0 | 10 |
| Swallow | | 89 | 0 | 0 | 89 |
| House Martin | | 21 | 0 | 0 | 21 |
| Meadow Pipit | | 37 | 0 | 0 | 37 |
| Yellow Wagtail | | 2 | 0 | 0 | 2 |
| Wren | | 85 | 0 | 69 | 154 |
| Duncock | | 74 | 0 | 89 | 163 |
| Robin | | 72 | 0 | 56 | 128 |
| Stonechat | | 3 | 0 | 0 | 3 |
| Blackbird | | 60 | 8 | 80 | 148 |
| Song Thrush | | 13 | 0 | 16 | 29 |
| Mistle Thrush | | 3 | 0 | 0 | 3 |
| Cetti's Warbler | | 1 | 0 | 0 | 1 |
| Sedge Warbler | | 52 | 0 | 6 | 58 |
| Reed Warbler | | 37 | 0 | 11 | 48 |
| Whitethroat | | 124 | 0 | 40 | 164 |
| Garden Warbler | | 7 | 0 | 1 | 8 |
| Blackcap | | 63 | 0 | 11 | 74 |
| Chiffchaff | | 76 | 0 | 8 | 84 |
| Willow Warbler | | 38 | 0 | 2 | 40 |
| Goldcrest | | 18 | 0 | 6 | 24 |
| Spotted Flycatcher | | 0 | 5 | 1 | 6 |
| Long-tailed Tit | | 64 | 0 | 18 | 82 |
| Blue Tit | | 134 | 0 | 71 | 205 |
| Great Tit | | 83 | 0 | 42 | 125 |

BIRD RINGING REPORT 2005 & 2006

| | Full Grown | Pulli | Retraps/ | |
|--|------------|-------|------------|-------|
| | | | Recoveries | Total |
| Treecreeper | 3 | 0 | 0 | 3 |
| Jay | 2 | 0 | 0 | 2 |
| Magpie | 1 | 0 | 0 | 1 |
| Rook | 3 | 0 | 0 | 3 |
| House Sparrow | 1 | 0 | 1 | 2 |
| Chaffinch | 57 | 0 | 14 | 71 |
| Greenfinch | 59 | 0 | 6 | 65 |
| Goldfinch | 110 | 0 | 5 | 115 |
| Lesser Redpoll | 3 | 0 | 0 | 3 |
| Bullfinch | 12 | 0 | 3 | 15 |
| Yellowhammer | 12 | 0 | 1 | 13 |
| Reed Bunting | 5 | 0 | 0 | 5 |
| | | | | |
| Total for 2005 Isle of Wight 50 Species | 1487 | 26 | 561 | 2074 |

Isle of Wight Totals Summary 2006

| | Full Grown | Pulli | Retraps/ | |
|--------------------------|------------|-------|------------|-------|
| | | | Recoveries | Total |
| Greater Canada Goose | 2 | 13 | 2 | 17 |
| Mallard | 1 | 0 | 0 | 1 |
| Sparrowhawk | 8 | 0 | 0 | 8 |
| Kestrel | 8 | 0 | 3 | 7 |
| Moorhen | 2 | 0 | 0 | 2 |
| Lapwing | 0 | 5 | 0 | 5 |
| Dunlin | 1 | 0 | 0 | 1 |
| Jack Snipe | 1 | 0 | 0 | 1 |
| Redshank | 2 | 0 | 0 | 2 |
| Woodpigeon | 2 | 0 | 0 | 2 |
| Swift | 0 | 0 | 2 | 2 |
| Kingfisher | 4 | 0 | 1 | 5 |
| Green Woodpecker | 2 | 0 | 1 | 3 |
| Great Spotted Woodpecker | 1 | 0 | 0 | 1 |
| Sand Martin | 32 | 0 | 0 | 32 |
| Swallow | 476 | 0 | 1 | 477 |
| House Martin | 2 | 0 | 0 | 2 |
| Meadow Pipit | 102 | 0 | 0 | 102 |
| Grey Wagtail | 2 | 0 | 0 | 2 |

BIRD RINGING REPORT 2005 & 2006

| | Full Grown | Pulli | Retraps/ Recoveries | Total |
|--|------------|-------|------------------------|-------|
| Wren | 58 | 0 | 68 | 116 |
| Duncock | 54 | 0 | 77 | 131 |
| Robin | 64 | 0 | 63 | 127 |
| Redstart | 3 | 0 | 0 | 3 |
| Stonechat | 6 | 0 | 0 | 6 |
| Blackbird | 78 | 0 | 99 | 177 |
| Song Thrush | 29 | 0 | 11 | 40 |
| Redwing | 2 | 0 | 0 | 2 |
| Sedge Warbler | 23 | 0 | 1 | 24 |
| Reed Warbler | 9 | 0 | 1 | 10 |
| Lesser Whitethroat | 1 | 0 | 0 | 1 |
| Whitethroat | 58 | 0 | 13 | 71 |
| Garden Warbler | 5 | 0 | 0 | 5 |
| Blackcap | 84 | 0 | 1 | 85 |
| Chiffchaff | 80 | 0 | 4 | 84 |
| Willow Warbler | 38 | 0 | 0 | 38 |
| Goldcrest | 22 | 0 | 9 | 31 |
| Firecrest | 1 | 0 | 0 | 1 |
| Spotted Flycatcher | 4 | 0 | 0 | 4 |
| Long-tailed Tit | 41 | 0 | 14 | 55 |
| Blue Tit | 236 | 0 | 136 | 372 |
| Great Tit | 132 | 0 | 55 | 187 |
| Jay | 4 | 0 | 3 | 7 |
| Jackdaw | 0 | 3 | 0 | 3 |
| Carrion Crow | 1 | 0 | 0 | 1 |
| House Sparrow | 0 | 0 | 1 | 1 |
| Chaffinch | 72 | 0 | 13 | 85 |
| Greenfinch | 74 | 0 | 5 | 79 |
| Goldfinch | 55 | 0 | 6 | 61 |
| Linnet | 3 | 0 | 0 | 3 |
| Bullfinch | 7 | 0 | 3 | 10 |
| Yellowhammer | 11 | 0 | 2 | 13 |
| Reed Bunting | 4 | 01 | 5 | |
| Total for 2006 Isle of Wight 52 Species | 1893 | 22 | 597 | 2512 |

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ISLE OF WIGHT MARINE BIOLOGICAL REPORT FOR 2005 AND 2006

Roger J. H. Herbert

Report for 2005

Algae

In April, a course organised by members of the British Phycological Society visited Bembridge shore finding a large number of species, some of which have not previously been recorded within the area. These will be reported separately. A survey of the marine biotopes within littoral caves on the south coast of the Isle of Wight was carried out in September (Irving, 2006). A total of 17 caves were investigated and 14 biotopes identified, some of which were not possible to classify within existing schemes. Of particular interest, was the re-discovery of an un-described species of encrusting red alga, which had first been found by Ian Tittley in 1986.

Invertebrates

On 30th May, a specimen of the toothed topshell *Osilinus lineatus* was found amongst upper shore boulders on the western side of Freshwater Bay. This was possibly the same individual found in 2003. The species has been increasing in abundance at sites along the Dorset coast however it has not extended its range eastwards as rapidly as the related trochid *Gibbula umbilicalis*. In November the Tainaid *Apseudes talpa* was found amongst other dredged material collected in Osborne Bay by an oyster fisherman. There are relatively few records of this group from off the island coast and none known for this particular species.

Fish

A Boar fish (*Capros aper*) was found stranded on the beach at Compton Bay in February. This was the 9th record from our shores. A Sea Lamprey (*Petromyzon marinus*) was found washed up dead on the beach at East Cowes in early June. This species has not been recorded very frequently although is known to migrate up mainland rivers (JNCC, 2007). The species is protected under the EU Habitats Directive (Annex II).

IOW NFSA Records for 2005

Boat Records

| Species | Date | Location | Weight |
|--|------------------------|-------------|-----------|
| Garfish(<i>Belone belone</i>) | 16 th April | Off Needles | 1 lb 11oz |
| Stingray (<i>Dasyatis pastinaca</i>) | 9 th July | Off Nab | 51 lbs |

Shore Caught

| Species | Date | Location | Weight |
|---|---------------------------|---------------|----------|
| Red Mullet (<i>Mullus surmuletus</i>) | 5 th September | Fort Victoria | 2 lb 7oz |

Report for 2006

Survey work off the islands NE coast and south of the Needles, with divers and a towed video sledge, did not confirm the presence of mantis shrimp burrows. However a large number of holes and burrows in the sea bed were found in the close vicinity of Peel Wreck Buoy near the entrance to Wootton Creek, where large numbers of the mantis shrimps *Rissoides desmaresti* were dredged up by oyster fishermen during the winter of 2005/2006. As part of a separate project to help young people appreciate underwater life in the mouth of the Medina and West Yar estuary, in July, *Underwater Safaris* were organised from the Needles pleasure boat *Wild Rose*. By deploying a remotely operated video camera images from the camera were projected on a large screen and species that could be identified were recorded. The video recordings, which also include views of the *Zostera* beds off Norton Spit, are available from the County Records Office. Marine species identification courses were organised from the Medina Valley Centre in August yield many records.

Algae

During marine survey training weeks in August a large number of species were recorded at several sites. At Bembridge a survey was carried out to compare the abundance of *Zostera* in the lagoon immediately south of the lifeboat station, with that determined in 1996 (Brenchley *et al*, 1996). Results showed that although still abundant in parts of the lagoon the distribution of *Zostera* is patchy compared to the earlier survey. Of additional interest at Bembridge was the prevalence of the brown thong weed *Himanthalia elongata* at ELWS near the lifeboat station. This is primarily a southern species at the edge of its range and may be responding to warming seas.

Invertebrates

In April, a great grey sea slug *Aeolidiella papillosa* was found on the beaches of both Quarr and Bembridge. This species appears irregularly around the coast.

Whilst canoeing up the West Yar estuary on 2nd June a large number of the opisthobranch mollusc *Akera bullata* were seen swimming at the water surface between Kings Manor and the Causeway at high tide. This species has not previously been recorded in the estuary and records for the Island go back to Morey (1909) where it was found in Bembridge Harbour and amongst *Zostera* at St. Helens. It was also recorded from Seaview (Prebble, 1964) however it is uncertain whether these were shells or live specimens.

On September 1st, an examination of the wall on the eastern side of Freshwater Causeway revealed several specimens of the looping sail *Truncatella subcylindrica* at about EHWS. This nationally scarce species has not been seen at the site for about fifteen years since the wall was re-pointed.

In an attempt to locate burrows of the mantis shrimp *Rissoides desmaresti* a video sled was towed at several sites south of the Needles. Whilst no burrows were confirmed other species seen included the sunstar *Crossaster papposus* and starfish *Henricia oculata* and *Asterias rubens*.

Video cameras deployed off Kingston Wharf in the Medina estuary during the *Underwater Safari* revealed several peacock fan worms *Sabella pavonina*, the spider crab *Maja squinado* and sea anemone *Cerianthus lloydii*.

During the marine survey weeks between August 5-19th a large number of species were recorded. Work was carried out in the brackish lagoons at Yarmouth and Newtown, on the shores of

ISLE OF WIGHT MARINE BIOLOGICAL REPORT FOR 2005 AND 2006

Osborne Bay, Bembridge, Freshwater Bay and Shanklin, and offshore on the RV *Callsta* and RV *Bill Conway* from the National Oceanography Centre. Off Thorness Bay, the sea slugs *Hermaea bifida* and spectacular *Thecacera pennigera* were found amongst red algae and hydroids. Crustacea included several spider crabs *Liocarcinus arcuatus*, *L. marmoratus* *Inachus dorsettensis* and *Macropodia rostrata*, and hermit crabs *Pagurus cuanensis*, *P. bernhardus* and *P. prideauxii*. Students undertook some mapping of the *Zostera marina* beds south of the lifeboat station at Bembridge and transects across the *Zostera* beds in Osborne Bay and at East Cowes. The *Z. noltii* bed inside the Shrape at East Cowes has developed considerably in the past few years.

At the end of November and in December fierce storms lashed the south coast of the Isle of Wight. A considerable number of goose barnacles (*Lepas anatifera*) and by-the-wind sailor *Velevella velevella* were washed on to beaches off the islands north and south coasts. These were larger individuals, up to 8cm across, compared to those seen in previous years when washed ashore during gales in May and June.

Fish

On 13th September a 'Jack' (Family Carangidae) was caught by Geoff Blake off Sandown. This group are normally found in warmer seas including the Caribbean. The specimen, 37cm in length weighing 650g, was initially thought to be a Lesser Amberjack, however after further investigations at the National Aquarium in Plymouth (Herdson, 2006) it finally turned out to be a Greater Amberjack *Seriola dumerili*. This was the 7th ever recorded in British waters, and only the 2nd to be found east of Devon and Channel Islands. All but two individuals have been caught during the past 12 years which have had exceptionally warm sea temperatures. Several Red Mullet (*Mullus surmuletus*) were caught in the Solent this year and Smooth hounds (*Mustelus* spp.) were particularly prevalent through the autumn.

In the autumn months, several seahorses, (*Hippocampus gutulatus*) were found by local fishermen dredging for oysters off the islands north east coast. In July, one specimen was caught in an eel net set in Osborne Bay and another on 15th October in a trammel net set on the west side of Medina estuary between the Folly Inn and Medham. According to the Seahorse Trust, many seahorses were recorded around the UK during 2006 (Garrick-Maidment *pers comm*).

On 6th December, Geoff Blake caught a Tuna (*Thunnus* sp.) in a net off Sandown. It was about 12 inches (30cm) long and had been partially eaten by a conger eel. It is hoped that the exact species will be determined in due course.

IOW NFSA Records for 2006

Boat Caught

| Species | Date | Location | Weight |
|---|---------------------------|------------|-------------|
| Bass (<i>Dicentrarchus labrax</i>) | 19 th November | off Culver | 17lbs 6¾ oz |
| Corkwing Wrasse (<i>Crenilabrus melops</i>) | 16 th May | west Wight | 9oz |

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ISLE OF WIGHT MARINE BIOLOGICAL REPORT FOR 2005 AND 2006

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- Author:* Dr Roger Herbert, Medina Valley Centre, Dodnor Lane, Newport, Isle of Wight. PO30 5TE.

THE PORTABLE ANTIQUITIES SCHEME IN THE IOW

Frank Basford

The Portable Antiquities Scheme (PAS) is a voluntary scheme for the recording of archaeological objects found by members of the public. It was established following the passing of the *Treasure Act* 1996 when the Government recognised that there was an urgent need to improve arrangements for recording all 'portable antiquities', particularly those which fell outside the scope of the new Act. In 1997 the Department of Culture, Media and Sport (DCMS) provided funding to institute pilot schemes in six regions. Another five pilot schemes funded by the Heritage Lottery Fund were established in 1999 and further funding in 2003 enabled the Scheme to be extended to the remaining areas of England and Wales. In 2006 funding was provided by the DCMS to guarantee the operation of the scheme nationwide for two more years. By the end of February 2007 250,000 finds had been recorded nationwide.

A fundamental aim of the PAS is to advance knowledge of the history and archaeology of England and Wales by systematically recording archaeological objects found by the public. The Scheme aims to encourage all those who find archaeological objects to make these objects available for recording and promotes best practice by finders. It seeks to increase opportunities for active public involvement in archaeology and, in particular, to strengthen the links between metal-detector users and archaeologists. The Scheme also seeks to raise awareness among the public of the educational value of archaeological finds in their context and to facilitate research into these finds. Some even say that the PAS is 'the largest community archaeological project this country has ever seen'!

The PAS is operated by Finds Liaison Officers (FLOs) throughout England and Wales (and there is one for the Isle of Wight). Finds reported to the FLOs are recorded on an online database which contains both text and images and can be viewed by the public at www.finds.org.uk. The data is made available to Historic Environment Records throughout England and Wales

The Isle of Wight joined the Scheme in October 2003 and the majority of objects reported locally since that date have been finds made by metal detectorists. The Isle of Wight County Archaeology & Historic Environment Service has had a good relationship with metal detectorists since the late 1970's. Currently, the Island has three metal detecting clubs with about one hundred members in total. Each club organises rallies which are frequent and regular. It is common practice for clubs to pay the landowner a fee, per head, per day. The Local FLO, Frank Basford, is based within the Archaeological Service and is able to attend rallies, club meetings and other social functions. He encourages club members to record the location of all finds using a Global Positioning Systems (GPS) device and these locations are recorded as Ordnance Survey grid references on the finds bags at the time of discovery. Each club has a rule within its Codes of Conduct that the FLO is given access to examine all finds.

In the Isle of Wight, artefacts have been recorded dating from the Palaeolithic to the 20th century. Finds post-dating AD 1700 are not normally recorded but some of these later finds are recorded if they are of particular local interest. For example, an aluminium flare cartridge of German origin, found at Godshell, close to where a Junkers Ju 88 crashed in August 12 1940, has been entered on the database.

All Treasure finds have to be reported to the Coroner under the *Treasure Act* 1996. In these cases the FLO serves as the Coroner's Officer and attends inquests when necessary. 'Treasure' is defined in the 1996 Act as any gold or silver object at least 300 years old, two or more gold or silver coins at least 300 years old found together, ten or more base-metal coins at least 300 years old

PORTABLE ANTIQUITIES SCHEME IN THE IOW

found together, prehistoric base-metal assemblages, and objects found in association with Treasure items.

The overall effect of the PAS has been a substantially increased knowledge of Isle of Wight archaeology. There has been an increase in the number and known distribution of recorded artefacts within nearly all classes of metal finds from the Bronze Age onwards. For the Early Medieval and Medieval periods this increase in knowledge has been especially significant. Moreover, the increase in recorded finds has not been limited to metal artefacts. Flint implements and debitage of the Palaeolithic, Mesolithic, Neolithic and the Bronze Age periods have been reported by metal detectorists and also by other members of the public. The FLO has also recorded prehistoric flint-work when noted during metal detecting rallies.

Not many mainland finds are reported on the Island. However, an assemblage of Mesolithic blades and microliths has been recorded from the garden top-soil of a house at Rowlands Castle, Hampshire. A Neolithic polished axe originating from Great Langdale has been reported although the find-spot is uncertain. Another Neolithic polished axe found in the inter-tidal zone of the north-west coast is of Cornish greenstone and an Early Bronze Age axe-hammer made of dolerite (not an Island stone) has been found in a fisherman's net whilst oyster dredging in the Solent.

The oldest object of precious metal to be recorded has been a gold "basket" ornament of Early Bronze Age from Calbourne Parish. This had been folded flat several times, so when it was found it did not form a basket shape and resembled a milk bottle top rather than a very important find. This find is similar to a pair found with the Amesbury warrior on Salisbury Plain. Objects of this type have been identified as earrings in the past.

A Middle Bronze Age base metal scatter of three palstaves and one socketed axe has been recorded from Yarmouth Parish. The socketed axe conforms in all respects to the Taunton-Hademarschen type, the earliest regular socketed type in Britain and neighbouring Europe. More specifically, the precise form and decoration match a newly recognised regional variant, of which only a handful of examples are known from Dorset and Hampshire.

Offshore, a complete Middle Bronze Age rapier has been recovered from the seabed by a local fisherman. The specific features at the hilt end of this example are characteristic of Type Wandsworth, the predominant type within Group III. The type seems to belong largely to the Taunton stage of the Middle Bronze Age, currently dated circa 1400 - 1250 BC.

Near Sandown, a Late Bronze Age base metal scatter of implements has been found at the base of eroding cliffs. The scatter comprises six socketed axes, two gouges, two knives and one socketed hammer. In South Wight a Late Bronze Age penannular gold ring known as a lock-ring (hair ornament) was found in a rock-pool in the inter-tidal zone.

Other artefacts of Bronze Age metalwork include gold-coated penannular rings formerly known as "ring money" or "nose rings" and a gold penannular composite ring which may have been associated with a torque or necklet. Bronze Age implements have also been discovered as single finds, including an Arreton Down type spearhead.

A plough-scattered Iron Age coin hoard consisting of gold and base silver staters contained within a ceramic vessel has been discovered in Shorwell Parish. Three large hemi-spherical ingots were found close to the staters, one of base silver and the other two of copper alloy. Another Iron Age coin hoard consisting of almost one thousand base silver staters, also associated with a ceramic vessel, has been found in Brighstone Parish.

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A considerable number of individual gold and base silver staters (coins) have been discovered. The vast majority of staters found on the Island have been attributed to the Durotriges tribe. However, a small number of Armorican gold and silver staters have been recorded from one area in the West Wight.

Other than coins, few Iron Age objects have been reported and these consist mainly of brooches and sherds of pottery. An unusual find of Late Iron Age or early Roman date is a copper alloy crescentic-headed linch-pin, similar to one found at Brading Roman Villa during the 19th century excavations.

Metal detectorists have identified several new Roman occupation sites which have included ceramic building material. Roman coins are found during most metal detecting rallies as individual finds. Three dispersed coin hoards have been found, one of 2nd century date consisting of thirty eight coins, a radiate hoard of fifty four coins deposited about AD 270 and a late hoard of two solidii and five siliquae. One of the solidii (of Eugenius) was minted in Lyon AD 393-394. Brooches have been found in great variety and some of these are very interesting unclassified types. A complete tinned copper alloy 3rd or 4th century spoon has been reported from the West Wight. The stem of this elegant example is embellished with two twisted baluster mouldings. Another complete Roman artefact is a shale spindle-whorl found on eroding cliffs close to a Roman occupation site near Newtown.

A particularly important Roman find is a copper alloy long-nosed hound figurine of probable 4th century date. Small bronze dogs designed for votive offering are known from elsewhere in Britain and seven of these have been recorded from the late 4th century temple at Lydney in Gloucestershire dedicated to Nodens, the Celtic god of healing (see: Toynbee, T. M. C. 1964. "Art in Britain under the Romans". 126-7. Oxford: Clarendon Press). The Isle of Wight hound is very similar in style to one of the hound figurines from Lydney, although having a different pose.

A previously unrecorded Anglo-Saxon cemetery discovered in Shorwell Parish had been deep ploughed in the recent past but one definite (although damaged) grave containing grave-goods was identified. The inhumation within the grave had not survived due to the acidic nature of the soil but the grave contents included an iron sword, shield fittings, a copper alloy hanging bowl, a glass vessel, an iron vessel and a D-shaped buckle, all in poor condition. In addition to the items associated with this grave about seventy other scattered metal finds were found over a period of time and their positions were plotted using a GPS device. As a result of accurate plotting it could be determined that these finds came from about eight ploughed graves. The finds included sword pommels, a multi-faceted rock-crystal sword bead, a silver sword-ring, buckles and brooches. Two of the brooches are a pair of great square-headed type. These are silver and are each jewelled with garnets. However, both of these brooches were found in fragments, probably the result of continual ploughing.

A single ploughed-out grave of 6th century date in Freshwater Parish is represented by a silver sieve spoon, a rock-crystal ball and fragments of two square-headed brooches. These grave-goods indicate a wealthy female grave. There is a good parallel for the spoon from grave 45 at Chessell Down Anglo-Saxon cemetery, Isle of Wight (see Arnold, C. J. 1982. "The Anglo-Saxon Cemeteries of the Isle of Wight". Pl. 1c. Trustees of the British Museum).

A gold Anglo-Saxon, 7th century "pyramidal" sword belt fitting found in an inter-tidal context at Bembridge has been acquired by the Isle of Wight County Museum Service. The surface of the

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fitting is decorated with pentagonal panels filled with cell-work which originally accommodated cut plate garnets. Only one of these garnets has survived. A rare find from Calbourne Parish is a pair of copper alloy divinational rods of 6th or early 7th century date (the first to have been found in Britain).

Anglo-Saxon brooches and coins have been reported as individual finds. A rare coin, from Calbourne Parish, is a halfpenny of King Eadwig King of all England AD 955-957, of Wessex AD 957-959. The coin was minted at Winchester.

An exceptionally important find is the complete copper alloy Early Christian skillet found in Shalfleet Parish. The vessel is thought to be a baptismal vessel and dates from c. AD 600 – c. AD 800. Further details of this find can be seen on the PAS website (see find number IOW-0D5540 at www.finds.org.uk). The skillet is also featured in the PAS Annual Report for 2004/05 which can be viewed on the website and in *Current Archaeology* 203, May/June 2006.

Medieval and Post Medieval silver coins are found at almost every metal detecting rally. A highly attractive gold angel of Henry VIII has been found in Godshill Parish and a half-angel from the same reign has been recorded near Newtown. A significant find made near Yarmouth is a scatter of about ninety coins dating from Henry II to Edward II. It is thought that these finds may represent the site of a fair. Close liaison with members of the metal detecting club which discovered the finds has enabled the location of each coin to be recorded accurately using GPS. A Medieval copper alloy weight box that once contained a nest of cup-weights has also been discovered at this site.

A large number of Medieval and Post medieval dress accessories in the form of buckles, brooches, mounts and dress-hooks have been recorded. Other finds include pilgrim ampullae, Papal bullae, finger rings, seal matrices and harness mounts and pendants. A particularly interesting find from Brighstone Parish is a small copper alloy figurine of the Madonna and Child of 14th century date. Such figurines are generally considered to be fittings from Precentors' staffs or croziers. They may also have been used in association with tabernacles. Another religious object from Newport is an alabaster carving of a bird, probably an effigy of the Dove as the Holy Spirit. The outline profile of the mount is coffin-shaped and the object may possibly have formed a lid for a miniature coffin which served as a reliquary.

A particularly rare find from near Arreton is a thirteenth or early fourteenth century silver seal matrix containing a Roman intaglio made of red jasper. The inscription reads **Walter of Longdown**, and the intaglio of the first century AD depicts Victory standing on a globe.

A remarkable Tudor huntsman's silver whistle has been found near Shalfleet and is decorated with zones of waffle-work edged with a border of emblematic rose and pomegranate motifs. Another Tudor object from Arreton Parish is a silver-gilt cap badge. A later, but unusual find from near Shalcombe is a silver plated copper alloy sixpence of the Sommer Islands (now known as the islands of Bermuda). The obverse depicts a hog and the reverse depicts a fully rigged sailing vessel. This coinage, the first struck for the English Colonies in America, was issued about 1616. The coins were known as "Hogge Money" or "Hoggies" and were probably not minted after 1624.

A wide variety of ceramic vessel sherds dating from the Iron Age to the 20th century are reported by fishermen who have been dredging for oysters in the Solent. However, the majority of this material is Medieval and later although a complete Roman vessel has been found in this manner. A

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large amount of ceramic building material including Roman tile has also been recovered from the seabed.

Very large numbers of bottle tops, cans, modern coins and tent pegs were found during a metal detecting rally in a field near Afton Down, Freshwater. This came as no surprise to the FLO who remembered it as the site of the Isle of Wight pop festival which he attended in 1970!

Author: Frank Basford. Finds Liaison Officer
Portable Antiquities Scheme
March 2007

Illustrations: (all by Frank Basford)

IOW2003-91 - Middle Bronze Age Taunton-Hademarschen type socketed axe. Length 120mm.

IOW2005-135-1 - Iron Age or Early Roman linch-pin. Width 54mm.

IOW2006-23-15 - Roman "long-nosed hound" figurine of probable 4th century date.
Length 39mm.

IOW2006-26-2 - Early Roman insect brooch. Length 38.5mm.

IOW2006-40-59 - Anglo-Saxon 6th century equal-armed brooch. Length 81mm.

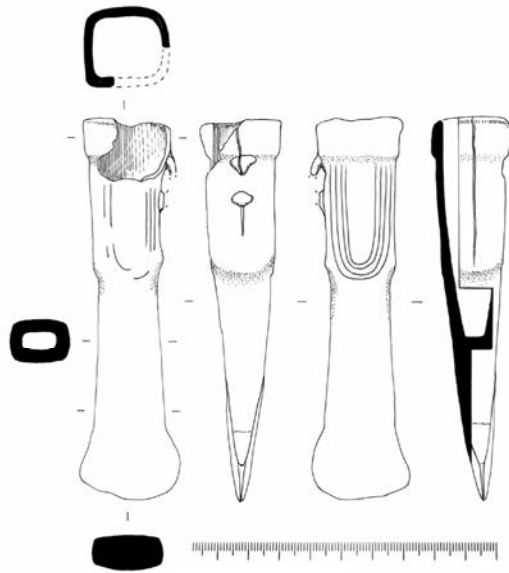
IOW2005-168-3 - Anglo-Saxon, late 5th/ early 6th century button brooch. Diameter 18mm.

IOW 2003-32-2 - Papal bull (lead seal) of Pope Gregory X (1271-1276). Diameter 38 mm.

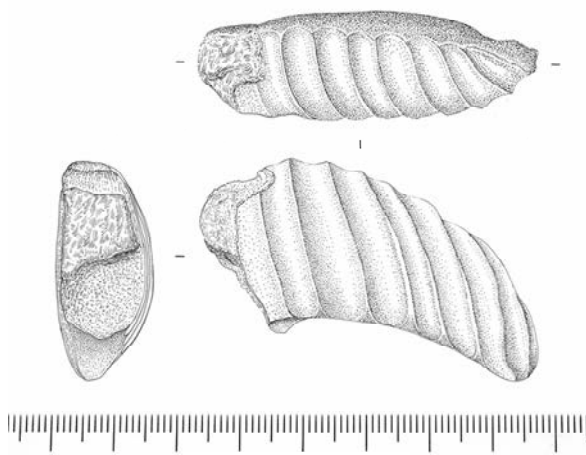
IOW2005-164-14 - Medieval, 13th century annular brooch. Length 27mm.

IOW2005-45 - Post Medieval, 16th century dress-hook. Length 33mm.

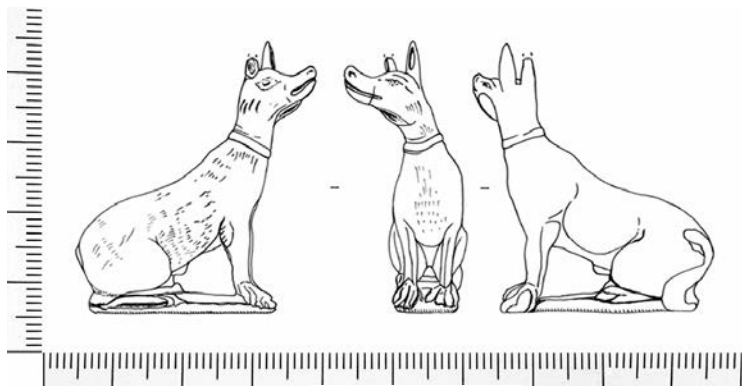
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IOW 2003-91

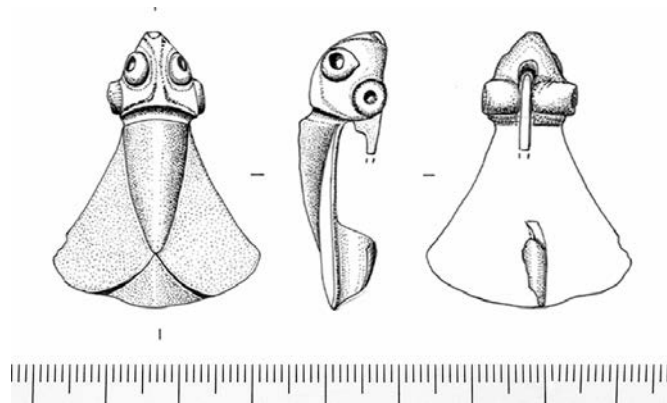


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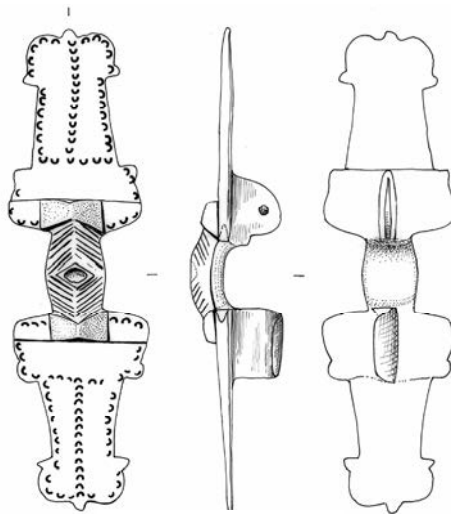


IOW 2006-23-15

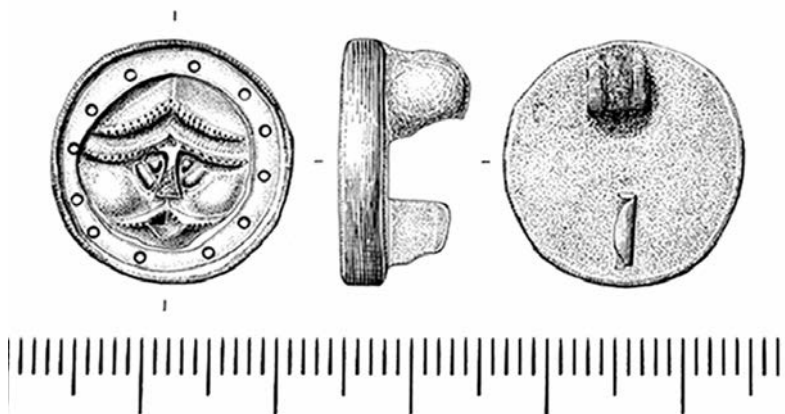
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IOW 2006-26-2



IOW 2006-40-59

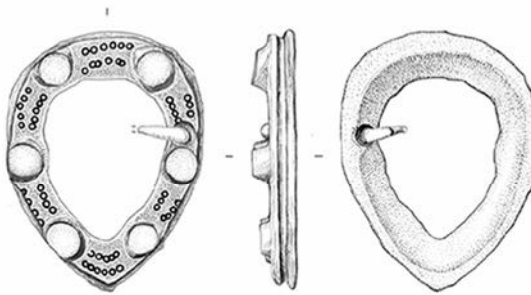


IOW 2005-168-3

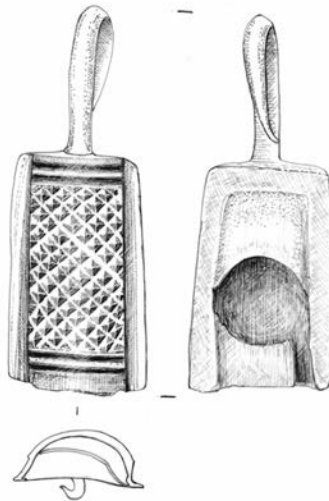
PORTABLE ANTIQUITIES SCHEME IN THE IOW



IOW 2003-32-2



IOW 2005-164-14



IOW 2005-45

METEOROLOGICAL REPORT FOR SHANKLIN, ISLE OF WIGHT FOR THE YEAR 2006

Clive Cooper

Abstract

Shanklin Weather Station was established approximately 57 years ago. It is classed as a Health Resort Station and is owned and maintained by the Isle of Wight Council. The station is situated at The Mead, a park area just past Shanklin 'Old Village' towards the outskirts of the town and is 50 feet above sea level. The station is a simple one consisting of a 5" standard rain gauge and a Stevenson's Screen equipped with four thermometers. Readings and observations are taken twice daily at 09.00GMT and 17.00GMT. The Campbell Stokes recorder is located on the roof of Shanklin Theatre which, at 180 feet above sea level, is the highest point in the town. Readings here are taken at 17.00GMT. I have access to some old Weather Diaries and all averages, etc refer to the period 1983 - 2006.

Summary

2006 was a year of records. It began with the coldest winter since 1996/1997. January was the third driest January in 24 years. June was the sunniest, driest and second warmest in 24 years and July was the sunniest and warmest. In the media, July 2006 was cited as the warmest ever month since records began. September and October were the warmest and November was the sunniest in 24 years. The culmination of the high temperatures resulted in the warmest summer and autumn in the last 24 years. 2006 was probably the warmest year on record.

Temperatures

The winter of 2005/2006 was the coldest winter since 1996/1997. The weather warmed up and the subsequent July was the warmest on record with above average temperatures being maintained for the rest of the year the summer and the autumn were the warmest since my records began. The yearly mean temperature was 11.71°C and was 0.93°C above the long-term average. 2006 was the warmest year on record, marginally warmer than 2002, which had a yearly mean of 11.67°C. There were nine months with above average temperatures. The months with positive anomalies were September with 2.7°C, July with 2.6°C, October with 2.5°C, November 1.6°C, December with 1.2°C, June with 1.1°C, April with 0.6°C and May and August each with 0.4°C. There were three months with a negative anomaly; March with 1.1 °C, February with 0.8°C and January with 0.1 °C. Overall the mean minimum temperature was 1.05°C above the yearly average and the mean maximum was 0.83°C above the yearly average.

The highest temperature of the year was 28.8°C and occurred on 17th July. There was a total of 57 days (27 days more than the long-term average) when the temperature reached or exceeded 21.1°C 70F; 11 in June, 24 in July, 13 in August and nine in September. The lowest maximum daytime temperature of 1.2°C was recorded on 2nd February. The highest overnight temperature was 18.2°C and was recorded on 6th August. The lowest overnight minimum temperature was -2.4°C on 25th January. There was a total of 18 air frosts (defined as a temperature below 0.0°C); five in January, six in February, five in March and two in December. The latest spring frost was recorded on 5th March. The first frost of the autumn/winter was recorded on 20th December.

Rainfall

The rainfall for the year 2006 totalled 720.2mm representing 83% of the long-term average. 2006 was the driest year since 1991. 2006 was 2.9mm drier than 2005, and the fourth consecutive year with below average rainfall. There were 155 days with measurable rainfall. The three months with above average rainfall were December with 111.8mm (111% LTA), March with 71.8mm

METEOROLOGICAL REPORT FOR SHANKLIN, ISLE OF WIGHT FOR 2006

(116% LTA) and May with 84.4mm. (188% LTA). The nine months with below average rainfall were: June with 4.4mm (10% LTA), January with 18.4mm (18% LTA), August with 28.4mm (56% LTA), July with 29.3mm (66% LTA), April with 41.9mm (69% LTA), October with 103.2mm (85% LTA), September with 62.2mm (88% LTA), February with 60.4mm (97% LTA), and November with 104.0mm (98% LTA).

An amount of rainfall reaching or exceeding 25.4mm (1 inch) in a 24 hour period ending at 09.00GMT, did not occur during 2006 - the first time since 1984. The wettest day was the 13th September when 24.0mm was recorded.

Sunshine

The total sunshine hours for 2006 was 2083.2 which represents 111% of the long-term average. Last year was the fourth consecutive year where 2000 hours of sunshine was exceeded. The sunshine for the three summer months, June, July and August totalled 918.6 hours. The sunniest month of the year was July with 340.4 hours, representing 134% of its long-term average. During 2006 there were seven months with above average sunshine; November with 155% LTA (126.2 hours), July with 134% LTA (340.4 hours), June with 132% LTA (320.3 hours), March with 109% (135.2 hours) August and September both with 107% LTA (257.9 and 183.4 hours respectively) and April with 103% LTA (196.4 hours). The five months not to attain their monthly average were May with 87% LTA (211.0 hours), February with 89% LTA (78.7 hours), January with 91% (63.6 hours) October and December both with 94% LTA (114.0 hours and 56.1 hours respectively). The sunniest day of 2006 was 14th July when 15.4 hours were recorded.

Between the 1st May and 30th September there were 64 days on which over 10 hours of sunshine were recorded. This is five days more than the long-term average.

Miscellaneous Phenomena

Thunder

Thunder was heard on 13 days compared to the long-term average of 10; four in July, two in August, one in September, five in October and one in November.

Hail

Hail was recorded on 4 days; one in April and three in November.

Sleet / Snow

Sleet and/or snow fell on 10 days: two in January, five in February and three in March. The falls were mainly light in Shanklin although snow was observed lying on the downs on the 24th March.

Gales

Gales occurred on 30 days during the year; two in January, two in February, five in March, four in May, one in September, three in October, five in November and eight in December.

METEOROLOGICAL REPORT FOR SHANKLIN, ISLE OF WIGHT FOR 2006

MONTHLY WEATHER SUMMARY - 2006

| MONTH | AVE. TEMP. °C | MEAN MAX. °C | MEAN MIN. °C | RAINFALL mm | SUNSHINE HOURS |
|---------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|---------------------------------|
| JAN | 5.6 | 7.8 | 3.4 | 18.4 | 63.6 |
| FEB | 4.5 | 6.8 | 2.1 | 60.4 | 78.7 |
| MAR | 5.9 | 8.4 | 3.4 | 71.8 | 135.2 |
| APR | 9.2 | 12.2 | 6.2 | 41.9 | 196.4 |
| MAY | 12.3 | 15.4 | 9.2 | 84.4 | 211.0 |
| JUN | 15.7 | 19.8 | 11.5 | 4.4 | 320.3 |
| JLY | 19.4 | 23.5 | 15.3 | 29.3 | 340.4 |
| AUG | 17.5 | 21.0 | 14.1 | 28.4 | 257.9 |
| SEP | 17.6 | 20.5 | 14.7 | 62.2 | 183.4 |
| OCT | 14.7 | 17.0 | 12.3 | 103.2 | 114.0 |
| NOV | 10.3 | 13.3 | 7.3 | 104.0 | 126.2 |
| DEC | 7.9 | 10.4 | 5.5 | 111.8 | 56.1 |
| YEARLY | 11.71 | 14.67 | 8.75 | 720.2 | 2083.2 |
| FIGURE | | | | | |

Author : Clive Cooper, 78 Whitecross Avenue, Shanklin, Isle of Wight PO37 7ET

OBITUARIES

Derek Agutter Reid (1927 - 2006)

Derek Reid, who died on 18th January 2006 aged 78, was an internationally respected authority on fungi. Although he was not a member, he had a long and fruitful association with the Society and many of its members, both living and deceased. Much of the information in this account comes from conversations with Derek whilst he was staying with us.

Derek Reid was borne on 2nd September 1927 at Leighton Buzzard, Bedfordshire. He was brought up in a sixteenth century half-timbered house in the High Street. His father and grandfather had run a shop from the premises, his father selling artists materials and picture frames, the family living upstairs. At school, Derek developed an interest in painting fungi. This was largely self-taught but he was encouraged by his father, who painted watercolours, and more particularly by his mother, who, he said, introduced an element of discipline into his paintings. He eventually amassed a huge collection of over 2000 fungal paintings over a period of more than 50 years of mycology. Some of them were published in the series of *Coloured Icones of Rare and Interesting Fungi* (1967-72). This work included descriptions of many new species and the series he started has continued with other contributors.

Derek went to University College at Hull after the War, to study for a degree in Botany and Geology. This followed a period of two years in the Royal Medical Corps, where he worked in hospital pathology laboratories. On arrival at Hull he found conditions to be rather spartan; students were housed in converted nissan huts. Derek was already interested in fungi, but he became inspired by Dr. John Webster (later Professor Webster) who was a young mycology lecturer at the University. Derek attended his first British Mycological Society forays whilst a student at Hull. He was also much influenced by Professor Good, the head of the Botany Department, with whom, as a student, he visited many good botanical sites. These included annual visits to Dorset, and a tea shop at Corfe Castle was always included in the itinerary. It was here that Derek gained a reputation for consuming large quantities of cream cakes, a reputation which stayed with him! Derek recounted that Professor Good had provided him with the inspiration to be a mycologist, but not the training to pass examinations!

Through Dr. Webster, Derek was recommended to work at Kew where the Mycology department at the time was dominated by Elsie M. Wakefield and R.W.G. Dennis, two highly influential mycologists of international renown. He took the place of Elsie Wakefield following her retirement in 1951. He worked at Kew Herbarium throughout his life, first as a scientific officer, then, in 1958, as senior scientific officer. He gained his PhD in 1964 for his monograph on the world species of stipitate *Stereum* species. Finally, in 1975, when Dennis retired, he was promoted to head of the mycology section. Although he published nearly 200 scientific papers, he will perhaps be most widely remembered as editor of Roger Phillips *Mushrooms*, the first extensive popular photographic guide to fungi, published in 1981 and still in print and highly regarded.

Derek met his first wife, Pamela Saich, also a mycologist, on a fungus foray and they married in 1953. They were fortunate to have rented accommodation in the grounds of Kew Gardens, in the servant's quarters of Kew Palace, the seventeenth century wing of a 16th century house. Derek was able to commute to work at the Herbarium through the gardens by bicycle, and he had a key to the gates so that he could go out in the evenings. The house had gas for heating, cooking and lighting. Electricity was finally installed at the time of the visit of The Queen to celebrate the bicentenary of Kew Gardens in the 1960's. The house was allegedly haunted and his second wife, Sheila, claims to have seen a scullery maid in one of the rooms. When Derek first worked at Kew, the gardeners had no vehicles, and two cart horses were kept in the grounds to tow carts around the Gardens.

OBITUARIES

Derek was fortunate to be able to travel widely in his work, collecting throughout Europe, in North America, Australia, in Trinidad and Tobago. In the late 1960's, during a Botanical Congress held at Kew, he met Professor Albert Eicker who was the Head of Botany at the University of Pretoria. He persuaded Derek to visit him in South Africa. At first he was reluctant to go but, Professor Eicker persisted and so was formed a fruitful mycological and amicable partnership. Derek annually visited South Africa to carry out mycological studies long after his retirement. He held the position of Visiting Professor in the Botany Department between 1989 and 1997. This was the only place of mycological taxonomic research in South Africa and the two of them described many new species and, according to Derek, never got around to writing up many others. The partnership continued until the retirement of Professor Eicker in 1998, after which Derek no longer spent time in South Africa and taxonomic interest in fungi in South Africa waned.

Derek and his first wife divorced in the 1970's. He married his second wife, Sheila, in 1987. Sheila had been a cleaning operative in the Ministry of Agriculture at Whitehall at the time that the Labour M.P., David Blunkett, was a civil servant working on the marketing of eggs. On one occasion, Sheila had to assist David Blunkett to evacuate the building at the time of a bomb scare. This was successfully accomplished but the event proved too traumatic for David Blunkett's guide dog, which had to be put down subsequently. Sheila subsequently took a job at Kew, where she met Derek.

Derek retired, reluctantly, at the age of sixty-five in 1992 and went to live at Elmer Sands in West Sussex, in a house which had been his weekend retreat for many years. On retirement, laboratory space was provided for him to work one day a week at Kew. This was very much the pattern with retired members of staff at that time. He continued under these arrangements for a few years until he was refused permission to continue to work at Kew by David Pegler, the head of mycology at the time. This caused Derek much grief, as the two had never got on particularly well.

Derek always showed an interest in supporting local natural history groups and stimulating the interest of amateur mycologists. He took evening classes in London and led Field Studies courses at Box Hill and Preston Montford. He continued to run weekend courses for the Country-side Education Trust, based at Beaulieu in the New Forest, for many years up until 2004. He trained the television outdoor survival presenter, Ray Mears, in the identification of fungi and remarked what an enthusiastic and able student he proved to be.

Derek had a long association with the Bedfordshire Natural History Society, his home county. He joined in 1950 and soon attended the annual forays, which had been led by R.W.G. Dennis from their foundation in 1946. He attended their Society Foray annually until 1998, leading a total of 45 forays, and he maintained their record cards for a remarkable 47 years.

Derek arrived on the Island in 1980 to assist with our Society annual fungus foray, having been invited by Oliver Frazer, following Dr Ramsbottom's suggestion. His first Island foray was on Mottistone Down, a meeting held jointly with the British Mycological Society. Also in attendance was Audrey Thomas, who worked at Haslemere Educational Museum and had already visited the Island earlier with Mr E. H. Ellis from Guildford. Derek and Audrey proved to be a 'mycological couple'. They were a memorable 'team' for many years at fungus forays, Audrey patiently and repeatedly explaining the characteristics of some of the more readily identified species to the queues of eager forayers with laden baskets, whilst Derek concentrated on the critical species.

Following Derek's divorce from his first wife, he had developed an exuberant manner and a reputation as something of a ladies man! It was Derek, and particularly Audrey, who nurtured David Carr's growing interest in fungi, which was to develop into a genuine talent, David



Following Derek's divorce from his first wife, he had developed an exuberant manner and a reputation as something of a ladies man! It was Derek, and particularly Audrey, who nurtured David Carr's growing interest in fungi, which was to develop into a genuine talent, David

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taking over as leader of the Fungus Section of the Society. Eventually, Audrey's declining health reached a point where she was reluctantly unable to assist with the annual forays, but Derek continued, visiting each year up until 2005, when his wife, Sheila, was diagnosed with cancer and he needed to remain with her.

During the course of his career, Derek described many fungal species new to science and he had eight fungal taxa named after him in his lifetime, in the tradition of honouring someone who has studied a particular genus in detail. One of these, *Hygrocybe reidii*, an orange-coloured waxcap with a characteristic honey-like smell, was named in Reid's honour by the French mycologist Robert Kühner in 1976; it is a widespread species of unimproved grasslands. During Derek's visits to the Island, he was particularly intrigued by the discovery, in 1989, of a large *Amanita* which had become established in the holm oak wood on St Boniface Down, Ventnor. He identified this as *Amanita ovoidea*, and the discovery resulted in a joint paper with myself, published in *The Proceedings* in 1993. St Boniface Down has since become a site of pilgrimage for mycologists keen to see this Mediterranean fungus growing in its only permanent site in this country.

Derek died unexpectedly and peacefully in his sleep on 19th January 2006, aged 78 years, leaving his wife, Sheila, and a son David by his first marriage, a malacologist at the Natural History Museum. He left all his books, papers and paintings to Kew.

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Colin Pope

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Dr Jack Jones (1926-2006)

Our society shares its loss with an array of Island cultural organisations that will miss the gentle wit, wisdom and companionship of Dr Jack Jones. As Leader of the Society's Archaeological Section in the 1960s he will be remembered as an ever affable and truly accomplished colleague, mentor and friend.

Jack and Johanna Jones arrived in the Island in December 1953. They settled in the Curator's flat high in the Montacute Tower of Carisbrooke Castle Museum. At the age of 27 Jack had moved from the Grosvenor Museum at Chester. There, as Assistant Curator, he had worked under Dr Graham Webster, the authority on Roman Britain and the Roman army. Living literally 'on the job' Jack made the museum a true temple of the Muses and he and Johanna clearly gave all.

Jack came to the Island with significant credentials. He brought an Oxford degree in History, a Diploma in Anthropology and Fellowship of the Museums Association. Something of his anthropological interests had been happily tickled at Chester where he had opened a box of excavated Roman material to find a set of bronze false teeth. At Oxford Jack took part in an elaborate hoax in which an obscure academic was heralded as a distinguished speaker at a highly publicised meeting of the University Archaeological Society. After the speaker had been introduced, the doors of the lecture theatre were locked. For the next three hours the 'guest' then proceeded to read the bible page by page in Welsh.



It was the Island's good fortune that Jack and Johanna decided on an extended stay. Due to Princess Beatrice, the last Royal resident of the castle, the museum had found home within a principal guardianship monument that was, then, administered by the Ministry of Works. The Trustees of Carisbrooke Castle Museum were few and unassuming. The Ministry certainly found a local museum an anomaly in its national portfolio of tidy ruins. The local authorities of the Island chose to see a Castle Museum as something that might be funded from the Ministry's turnstile. The challenge for Jack had already been set.

Those of us who enjoyed the privilege of working in the museum with Jack would later glimpse many vignettes of his life within the castle walls where he and Johanna were ever a hospitable team. At a management meeting a Ministry representative had announced to Jack that "there is nothing in the Ancient Monuments Act of 1912 that obliges Government to assist the public in understanding or interpreting an ancient monument or, indeed, a museum within a monument". For Jack this was no more than an intriguing pebble amongst the stones of a familiar curatorial road.

Entrenched adversaries of the museum could be amusingly satirised to neutralise their sting. By this means, dark shadows cast by such characters as 'Schickelgruber', 'the Black Widow' and the 'Micro-cerebral One' would fade to extinction in the light of Jack's sunny and reassuring cheerfulness. Inevitably, with the help of the Director of Education, 'Bill' Barratt and the Honorary Treasurer, Dr Keith Horsefield, Jack was to become the third musketeer to defend the Island's truly embattled museum. Jack's protective role and his daunting intellect were affectionately recognised amongst all of his staff where he was mutually acknowledged to be Fleming's 'M'.

Arriving at the Castle Museum 1973, I was soon introduced to Jack's ingenious philosophical mechanism for weathering adversity and winning the day through good humour. Locked in the black vault of the darkroom Jack emitted a sharp cry that was followed by an ominous crash. I was naturally concerned for his safety. After he had abandoned his bromide trays, Jack eventually ex-

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plained that the cry was the name of a certain councillor. "I always use his name when chopping the photographs in the guillotine". When a brittle cardboard storage box split and scattered all manner of contents from top to bottom of the cellar steps, Jack's perfectly natural exclamation was 'oh dear me, what a heterogeneous assemblage'!

Jack's gentle and impish good humour surely permeated the Isle of Wight Natural History and Archaeological Society. In the 1970s the Society's council meetings had become legend for the size of their attendance and their ponderous duration. When minutes of the previous meeting were read for approval, Jack politely enquired whether it should read 'minutes of a meeting held on the 17/18th of September. The irony of the point was apparently lost. When Jack arrived for the next meeting his duffle coat and thermos showed that he was set for a long haul.

Jack's academic contribution to Island life and Island history was ever sound, intricate and well measured. The '*Royal Prisoner*' first published by Lutterworth in 1965 was a seminal study of the context in which King Charles 1 had been imprisoned in Carisbrooke Castle. With characteristic modesty, Jack ceded the publisher's royalty to the museum's slender funds. Some years later his generosity was repeated when the second edition was printed. These were no small gestures.

In volume 6 of the *Proceedings* (1968) Jack presented an account of '*The building of a fort at Sandown*'. This study soon moved beyond architectural and military history to offer testimony to the impact of fort-building on the natural environment of the Island in the 17th century. The social, economic and political events of this period were later expounded in the Jones PhD thesis of 1978. This study of *The Isle of Wight 1558-1642* provided the long-sought framework in which Islanders might set a miscellany of events otherwise glimpsed through such random accounts as those given in the Ogländer archive and its published extracts in *A Royalist Notebook* (Bamford, 1936) and *Nunwell Symphony* (Aspinall-Ogländer, 1945).

Other historic sources explored by Jack had been virtually untapped. With fierce independence, Medina Borough Council had declined to entrust its historic archives to the safekeeping of the Isle of Wight County Record Office. Jack's diplomatic skills were fully tested in negotiating a key and access to a remote back-store in Quay Street, Newport. Here the medieval documents of the Borough were lurking amongst modern mortgage papers and social service records. His transcriptions of these documents were to be an intriguing and colourful revelation.

Jack's gift of communication led him to his collaborative work with Johanna on *The Isle of Wight; an illustrated history*. This was published in 1987 by the Dovecote Press. Its success was consolidated by Jack's *Curiosities of the Isle of Wight* produced by the same publisher in 1989. Fine scholarship, perhaps less known, is 'The historical background to the refortification' a specialist chapter in the English Heritage report on '*Excavations at Carisbrooke Castle, 1921-1996*' (C. J. Young 2000). Here Jack reveals something of that great fund of knowledge that he held on the events on the Island during and after the Armada episode of 1588. With his inimitable style and scholarship he leaves the reader eager for more. The medieval history of the castle had been outlined by Percy Stone in 1898 and revised in volume 5 of the *Victoria County History* published in 1912. There was surely much more in the original documents that Jack had yet to tell.

Due to the elegant and persuasive quality of his written works, Jack Jones has left Islanders with an enchanting and lasting legacy. This, surely, will be crowned by his unforgettable modesty and charm. Jack has also bequeathed to us the names of those long distant trails that offer both Vectensians and visitors a snakes and ladders route through the Island's historic landscape. The creation of the Isle of Wight Archaeological Committee and the funding of the Isle of Wight County Sites and Monuments Record can all be traced back to a vital round-robin, penned by Jack in his tiny museum office, in 1975.

Life rewarded Jack with all manner of surprises: the gift of a renovated London taxi, given by the Priestleys to assist his bicycle-driven archaeological fieldwork in the 1950s; an unexpected visit from a deranged mental patient who arrived in the courtyard of Carisbrooke Castle in a stolen

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red sports car and blowing a trumpet. “After engaging with him in a conversation on the life of Oliver Cromwell, for three quarters of an hour, I finally realised that this lunatic was standing between me and the door”. When the office phone rang, Jack heard a policeman whisper “just keep the man talking”. When problems seemed to be over, there were castle donkeys absconding to Newport High Street. Later, high in the tower, footsteps were heard on the stairs. Sunday lunch was then interrupted by the arrival of an itinerant goat from Shorwell.

These have been a little of the times and events in the life of Jack Jones, the like of which can never pass our way again. His experiences he shared with us with amusement and joy and in his company it was always easy to assume a better world. Our deepest sympathies go to Johanna. A gentle giant has walked amongst us and now we are left to gaze in awe at the depth of his footprints and the direction in which they have led.

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Dr. Eric Laidlaw (1915 – 2006)

ERIC FORTESCUE LAIDLAW was born in 1915.. His father, Dr. Frank Fortescue Laidlaw, was in general practice in Uffculme in Devon. Having read Zoology at Cambridge, Frank Laidlaw joined a scientific expedition to Malaya in 1898 and subsequently became an expert on the dragonflies and land molluscs of the region, publishing over a hundred scientific papers and donating specimens to the Natural History Museum. On his retirement he lived for a time at Ventnor where he pursued his natural history studies and rediscovered the Isle of Wight Helleborine at St. Lawrence in 1971.

Eric Laidlaw followed his father both in his career in medicine and in his lifelong interest in botany, especially that of Scotland and of Ben Lawers in particular, which he first visited with his father. He was educated at Epsom College and Peterhouse, Cambridge, and undertook his clinical training at St. Bartholomew's Hospital, qualifying MB, BChir(Cantab) in 1941.

Twice he held posts as a Resident Doctor at the Royal National Hospital, Ventnor. He spent some time at a clinic in Switzerland and was Resident Surgical Officer at the world-famous Brompton Hospital in London. When the post of Deputy Medical Superintendent at the RNH fell vacant in 1947 Dr. Alex Miller, then Superintendent, asked Eric Laidlaw to apply, and Eric was duly appointed, holding that post until 1956. By that time modern drug treatments for tuberculosis were in use, the demand for sanatorium beds was falling and Dr. Miller left to join the Isle of Wight Hospital. Dr. Laidlaw now became Acting Medical Superintendent and remained there until the closure of the Royal National Hospital in 1964.

He then moved to St. Mary's Hospital as Consultant Physician (Chest Medicine and Geriatric Medicine) with an office in the newly built Hassall Ward, named after Arthur Hill Hassell, M.D., F.L.S.(1817-1894), another doctor naturalist who specialised in the study of freshwater algae, and who was the founder in 1868 of what was then the National Cottage Hospital for Consumption and Diseases of the Chest, at Ventnor. Eric was devoted to Hassall's memory, was particularly concerned that Hassall's work in founding the RNH should not be forgotten, and proud of the fine portrait of Hassall that hung in the entrance to the ward named after him.

Dr. Laidlaw continued to supervise the treatment of all TB patients in the Island, but was increasingly concerned with the rising incidence of asthma, and of asbestosis and mesothelioma resulting from the exposure of Island shipyard workers to asbestos.

He developed a fully integrated geriatric service on the Island, a previously neglected discipline here, very necessary because of the increasing number of the elderly ill. He gained the respect of his colleagues for the new specialty of Geriatric Medicine, and was one of the first doctors locally to appreciate the skills and help of social workers. He initiated the Geriatric Day Hospital at St. Mary's, which was named after him, much to his embarrassment.

Great gentleness of manner and immense courtesy to his junior staff, nurses and patients made him much loved and respected despite, or partly perhaps because of his eccentricities and other-worldliness.

He retired in 1979 and continued to live in Wootton with his wife Brenda. In retirement he was the author of two well-researched books of local interest *The Story of the Royal National Hospital* (1990) and *A History of the Isle of Wight Hospitals* (1994). Eric joined the INWHAS in 1976 and as well as a keen interest in botany is remembered for leading some rather tortuous walks around St. Lawrence and some fiendish quizzes in aid of the Botanical Gardens. A Memorial Service was held on March 26, 2006 for Eric at St. Lawrence Church. At the end of the service a Peacock Butterfly was seen fluttering against the stained glass window inside the church. It was caught and released into the pale, early spring sunshine. Eric would have appreciated that.

David Biggs, Andy Butler

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Francis Rose (1921-2006)

The reputation of Francis Rose as a formidable field botanist went before him. I remember being told about field trips organised by this great teacher of botany who, with immense enthusiasm, would identify and patiently explain identification characters of plants in the field together with a wealth of detail about their distribution and ecology. His depth of knowledge meant that flowering plants, mosses, liverworts and lichens were equally familiar to him. He had a reputation of having botanised just about everywhere in the British Isles and on the near Continent, together with an encyclopaedic memory, a good humoured nature and an ability to teach and inspire others. His botanical knowledge of Southern England was unsurpassed. His field trips would continue well into the evening when light was failing and others enthusiasm was dwindling.

I subsequently attended some of his field visits when I was developing an interest in lichens, but my first direct contact with him was when I made the discovery of a large patch of lungwort (*Lobaria pulmonaria*) growing on an ash tree at Swainston. This splendid lichen is an old forest indicator species and, at the time, had not been recorded from the Island since the nineteenth century. I wrote to Dr Rose about my discovery and received a characteristically enthusiastic letter full of information about lichens and Isle of Wight sites and encouraging us to meet up for a field visit. He wrote:

I was delighted to receive your letter about lichens in the Isle of Wight, especially *Lobaria pulmonaria*. I have been working intensively for some years on lichen distribution and phytosociology, particularly in the New Forest but also in the rest of the country, and I have made several survey visits to the I.O.W. These however have been all too brief. The Island is near but it is very expensive to take one's car over, so day visits (without meeting a friend with a car in I.O.W.) are not very productive!

This was in January 1976. I was living in Edinburgh at the time but it was the start of a long period of regular exchange of correspondence, enthusiastic late evening telephone conversations, and packages of lichens sent off for identification.

I came to learn that Francis was not a newcomer to the Island. At the time, he had a post-graduate student, Rob Scaife, who was researching fossil pollen analysis on Island sites. Rob had been keen to carry out research on the Island and became a close friend of Francis Rose.

Lichens had become a very neglected group of plants in the twentieth century. The formation of the British Lichen Society in the mid 1950s came at a time when there was the glimmer of a re-awakening of interest in lichens but scarcely anyone had the knowledge to identify them. One of the early converts was Francis Rose, who already had a national reputation in higher plants and bryophytes. He was particularly interested in woodland lichens and made a special study of the New Forest lichens. Some woods were good for lichens and others were poor. Francis gained a legendary reputation for recognising promising sites from the ground, from the car and from the map. His highly developed ecological awareness was to elevate woodland lichen studies into an extremely valuable and powerful conservation tool. He was the first person to recognise the links with ancient woodland and medieval deer parks and *Lobaria pulmonaria* was the flagship lichen. Throughout the decade 1968-78, searching out relict woodlands containing this species and its associates became a minor obsession. At the same time, in order to understand the lichen flora afresh, the handful of developing experts set out to comb the countryside and record everything. One such pioneering band comprised Francis Rose, and two young enthusiasts Brian Coppins (later to become lichenologist at Edinburgh Royal Botanic Garden) and Allan Pentecost (who went on to study lichens in North Wales). They visited the Island in 1971 and made the first comprehensive lichen records since Victorian times. They did not discover much in the way of ancient woodland lichens. Francis wrote, '*I have seen few areas of old woodland in IOW that contain many old standard trees in the coppice that prevails*'. However, they were able to record much of great interest. They were just in time to record the rich lichen flora of English elm trees at places such as

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Newtown, Brading and Swainston, just before their loss to Dutch elm disease, and they discovered the lichenological riches of Godshill churchyard.

Francis Rose's knowledge of the Island's botany was immense by the time I met him, although, in fact, this was no different to his knowledge of very many counties of the British Isles. Indeed, he claimed to have worked in the field in every county of Britain, excepting Orkney, Shetland and the Outer Hebrides. He had visited and recorded many of our Island sites, some for the Hampshire and Isle of Wight Naturalists' Trust, and was passing his vascular plant records onto Bill Shepard and his bryophyte records to Lorna Snow.

One memorable occasion, was his visit in August 1986. Francis arrived at Ryde Esplanade station clutching a sandwich box which he opened to reveal a specimen of Red Helleborine (*Cephalanthera rubra*), one of Britain's rarest plants, sitting on a damp paper towel! It was my first encounter with the plant, which had come from The Warren in Hampshire and was the first specimen to have been found in Hampshire in modern times. Francis said that the flowering stem had been 'broken by a badger', although other explanations have been put forward for its accidental breakage! Anyway, he was keen for it to be preserved and we started our day's excursion with a visit to Carisbrooke High School Science Laboratories where we endeavoured to bleach the specimen with sulphur dioxide in a fume cupboard, a technique which, he alleged, would result in the colour re-appearing as it dried. This, in fact, proved unsuccessful!

His letters were always a delight to receive, full of helpful information about ecology, potential Island sites to visit, and the fruits of his latest visits to sites around the country and on the Continent. Profitable visits to certain ancient woodlands on the Island, in particular North Park at Swainston, Cliff Copse near Shanklin, Bonchurch Landslip and Briddlesford Copse, helped towards their subsequent designation as Sites of Special Scientific Interest. Following a visit to North Park Copse, Francis wrote '*The site should certainly be conserved. I shall urge the NCC people to go there in June, and I hope to be able to come for a couple of days myself.*' He was referring to a special Nature Conservancy Council event organised by Colin Tubbs to survey woodland on the Island. At the time, little was known about the ancient woodland resource on the Island. Accommodation was arranged at the historic Royal Sandrock Hotel (subsequently lost to fire) at Niton, from 31 May to 3 June 1981. The prestigious group included some of Britain's top woodland ecology experts. Apart from Francis, there was George Peterken, Keith Kirby, Colin Tubbs, Dick Hornby and others, and the event led to the notification of a number of Island woodlands as SSSI's.



Francis's Island visits, particularly when searching for Bryophytes, were often with his friends E.C. (Ted)Wallace & Rod Stearn. Together, they spent much time searching the Undercliff for its specialised Bryophyte flora in the early 1980s. Francis and Rod Stearn also surveyed Parkhurst Forest for the first time for bryophytes and lichens in 1998/9. He was able to reveal a surprisingly rich old woodland (wood pasture) flora in localised and scattered patches of oak woodland, previously unrecognised. This information had significant implications for how the forest would be managed.

With Francis's encouragement and assistance I was able to publish the first up to date lichen flora of the Isle of Wight in 1983, and he assisted with its revision in 2003.

Francis's health failed in his latter years, although he remained enthusiastic to visit the Island again. Alas, efforts to do so in recent years came to nothing. One of his last pieces of published writing was a short chapter in *The Isle of Wight Flora* (2003), entitled 'Island Distinctiveness'. This was mostly a reworking of material published elsewhere or in correspondence, which I

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undertook, but he spent some considerable time working up a comparison of the bryophyte flora of the Island with neighbouring Hampshire and Sussex.

His memory lives on in the Wild Flower Key, one of the most popular and highly regarded field guides which has never been out of print since it first appeared in 1981. It has recently been revised by Clare O'Reilly and it is the standard reference book on our Botany Group field meetings.

His memorial service, held at Wakehurst Place in Surrey, was a happy occasion attended by around 150 of his friends, family and associates from throughout the country and abroad. The sun shone, creating ideal conditions for an autumnal stroll around the gardens. David Bellamy, a one time student of Francis, officially opened a new bird hide on the Francis Rose reserve, we examined the rock outcrops in the woods with their colonies of Tunbridge Filmy fern, a habitat much cherished by Francis, and a commemorative oak tree was planted overlooking the reserve. Indoors, eminent botanists paid their respects and tributes to this great man of botany.

Colin Pope

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- Geology and meteorology
- Archaeology
- History
- Obituaries
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Within each section papers are arranged alphabetically by author, then by date. They precede regular annual reports, which are in date order

Vertebrates

Fish

| Author | Date | Title | Vol | Part |
|----------------|------|--|-----|------|
| Draper, I.J.H. | 1964 | Fish found in the Isle of Wight coastal waters 1956-1964 | 5 | 9 |
| Wadham, P | 1934 | Notes on the fishes, reptiles and mammals of the Isle of Wight | 2 | 5 |
| Wadham, P | 1936 | Notes on the fishes & mammals of the Isle of Wight | 2 | 7 |

Amphibians

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| Frazer, O.H. | 1964 | First survey of the Frog & Toad Spawning Areas in the Isle of Wight | 5 | 9 |
| Frazer, O.H. | 1965 | Investigation into the distribution of newts in the Isle of Wight in 1965 | 5 | 10 |
| Frazer, O.H. | 1966 | Second survey of the frog and toad spawning areas of the Isle of Wight | 6 | 1 |
| Frazer, O.H. | 1968 | Third survey of the frog and toad spawning areas of the Isle of Wight | 6 | 3 |
| Frazer, O.H. | 1970 | Fourth survey of the frog and toad spawning areas of the Isle of Wight | 6 | 5 |
| Frazer, O.H. | 1975 | Fifth survey of the frog and toad spawning areas of the Isle of Wight | 6 | 10 |
| Frazer, O.H. | 1976 | Survey of newts in the Isle of Wight 1976 | 7 | 1 |
| Frazer, O.H. | 1980 | Sixth survey of the frog and toad spawning areas of the Isle of Wight | 7 | 5 |

Reptiles

| | | | | |
|---------------|------|---|---|---|
| Burland, C.B. | 1982 | Slow-worms in the Isle of Wight 1980-1982 | 7 | 7 |
| Ritchie, D.F. | 1922 | Island Snake Lore | 1 | 3 |

Birds

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|--------------------------------|------|---|---|---|
| Blackburne, C.I. | 1936 | An experiment in migration with young white storks | 2 | 7 |
| Cheverton, J.M. | 1970 | Nesting of kittiwakes at Main Bench | 6 | 5 |
| Fox, R. H. | 1923 | New records & our birds as they are today | 1 | 4 |
| Grogan, R. & Whitbread, S. | 1999 | The mammalian prey of the barn owl on the Isle of Wight | 5 | |
| Henry, A.J. | 1954 | Census of the Isle of Wight rookeries 1954 | 4 | 9 |
| Jones, J.D. | 1960 | The song of the cuckoo | 5 | 5 |
| Machin, R.J. | 1971 | "Operation Nightjar" | 6 | 6 |
| Morey, Frank | 1922 | Birds killed on migration at St. Catherine's Lighthouse | 1 | 3 |
| Priestley, J.B. | 1948 | Birds of the Isle of Wight | 4 | 3 |
| Roberts, A.H.N. & Watson, D.A. | 2007 | Bird ringing report | 2 | |
| Stafford, J. | 1960 | Great spotted woodpeckers feeding on bird tables | 5 | 5 |

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| Stafford, J. | 1962 | Earliest record of the black-tailed Godwit in Isle of Wight | 5 | 7 |
| Stafford, J. | 1965 | The collared dove in the Isle of Wight | 5 | 10 |
| Stafford, J. | 1968 | The work of the bird recorder | 6 | 3 |
| Stafford, J. | 1970 | A review of the records of nesting kittiwakes in the Isle of Wight | 6 | 5 |
| Stafford, J. | 1970 | Operation Seafarer | 6 | 5 |
| Stafford, J. | 1973 | A century of seabird legislation in the Isle of Wight | 6 | 8 |
| Stafford, J. | 1982 | The breeding waders of wet meadows in the Isle of Wight | 7 | 7 |
| White, E.H. | 1947 | Some changes in Island bird life during the past 50 years | 4 | 2 |
| Wynne, J.F. | 1931 | Migration & bird marking | 2 | 2 |

Mammals

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|-------------------------------|------|---|----|----|
| Adams, L.E. | 1940 | The life history of the common mole | 3 | 3 |
| Burland, C. | 1975 | A survey of the red squirrels of the Isle of Wight Lung infection caused by <i>Hepatozoon</i> species in wild red squirrels on the Isle of Wight | 6 | 10 |
| Butler, H. | 2007 | | 22 | |
| Damant, G.C.C. | 1946 | The significance of body temperature in animals | 4 | 1 |
| Frazer, O.H. | 1969 | Survey of the distribution of the land mammals in the Isle of Wight in 1969 | 6 | 4 |
| Frazer, O.H. | 1987 | National small mammal survey at Walter's Copse 1983-1986 | 8 | 2 |
| Frazer, O.H. | 1987 | Bechstein's bat in the Isle of Wight | 8 | 2 |
| Frazer, O.H. | 1989 | The history of marine mammals off the Isle of Wight | 9 | |
| Grogan, R. | 1998 | The current & historic status of the otter (<i>Lutra lutra</i>) on the Isle of Wight | 14 | |
| Grogan, R. | 2004 | Effects of coppicing on the common dormouse in Isle of Wight woodlands | 20 | |
| Grogan, R. & Whitbread, S. | 1999 | The mammalian prey of the barn owl on Isle of Wight | 15 | |
| Gunn, J. | 1971 | Badgers in general | 6 | 6 |
| Heal, G.H. | 1954 | The otter | 4 | 9 |
| Jeffery, N. | 1998 | Habitat preferences of foraging bats | 14 | |
| Parker, M.J. | 1987 | Cowes bat survey 1986-87 | 8 | 2 |
| Parker, M.J. | 1989 | The distribution & populations of bats in Cowes 1985-1988 | 9 | |
| Parker, M.J. | 1990 | Isle of Wight bat colony survey 1985-1989 | 10 | |
| Pinder, R. | 1971 | Badgers in particular | 6 | 6 |
| Surujballi, V. | 1990 | A survey of the badger, (<i>Meles meles</i>) on the Isle of Wight | 10 | |
| Wadham, P. | 1936 | Notes on the fishes & mammals of the Isle of Wight | 2 | 7 |

Mammals annual reports

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| Cahill, M. | 1998 | Marine mammal reports for 1996 & 1997 | 14 | |
| Cahill, M. | 1999 | Marine mammal & reptile report for 1998 | 15 | |
| Cahill, M. | 2000 | Marine mammal & reptile report for 1999 | 16 | |
| Cahill, M. | 2002 | Marine mammal report 2001 | 18 | |
| Cahill, M. | 2003 | Marine mammal report 2002 | 19 | |
| Cahill, M. | 2004 | Marine mammal report 2003 | 20 | |
| Cahill, M. | 2005 | Marine mammal report 2004 | 21 | |
| Cahill, M. | 2007 | Marine mammal report 2005 | 22 | |
| Grogan, R. | 1998 | Amphibians, mammals & reptiles report Jan 97 - Nov 97 | 14 | |
| Grogan, R. | 1999 | Amphibians, mammals & reptiles report Dec 97-Nov 98 | 15 | |
| Grogan, R. | 2000 | Amphibians, mammals & reptiles report Dec 98 - Dec 99 | 16 | |
| Pope, C.R. | 1998 | Bats (Chiroptera) - 1997 | 14 | |

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| Pope, C.R. | 2002 | Bats (Chiroptera) - 2001 | 18 | |
| Pope, C.R. | 2003 | Bats (Chiroptera) - 2002 | 19 | |
| Pope, C.R. | 2004 | Bats (Chiroptera) - 2003 | 20 | |
| Pope, C.R. | 2005 | Bats (Chiroptera) - 2004 | 21 | |
| Pope, C.R. | 2007 | Bats (Chiroptera) - 2005 | 22 | |
| Pope, C.R. | 2007 | Bats (Chiroptera) - 2006 | 22 | |
| Invertebrates | | | | |
| Molluscs | | | | |
| Bray, S. & Herbert, R.J.H. | 1998 | Reassessment of the dog-whelk after legislation restricting the use of TBT antifouling paints | 14 | |
| Damant, G.C.C. | 1938 | Temperature & the grazing of pond snails A survey of the dog-whelk <i>Nucella lapillus</i> around the coast of the Isle of Wight | 3 | 1 |
| Herbert, R.J. | 1988 | Wight | 8 | 3 |
| Jackson, J.F. | 1925 | Supplement to Morey's 1909 Natural History of Isle of Wight (Mollusca) | 1 | 6 |
| Kennard, A.S. & Woodward B.B. | 1925 | On the Holocene non-marine mollusca of Gore Cliff | 1 | 6 |
| Killeen, I. | 1992 | Marine molluscs from Isle of Wight in the Leslie Prebble collections | 12 | |
| Light, J.M. & Killeen, I.J. | 1989 | A survey to record the marine mollusca of the Isle of Wight | 9 | |
| Pain, T. & Preece, R.C. | 1967 | The land Mollusca of the Bembridge limestone | 6 | 2 |
| Preece, R.C. | 1975 | The non-marine Mollusca of the Isle of Wight | 6 | 10 |
| Preece, R.C. | 1980 | <i>Pisidium pulchellum</i> Jenyns in the Isle of Wight | 7 | 5 |
| Preece, R.C. | 1982 | <i>Boettgerilla pallens</i> Simroth a new slug to the Isle of Wight | 7 | 7 |
| Insects general | | | | |
| Damant, G.C.C. | 1950 | Notes on some light-producing organisms | 4 | 5 |
| Ford, R.L.E. | 1977 | Migrations of insects in 1977 | 7 | 2 |
| Pope, C.R. | 1998 | Dead wood fauna of the Nunwell oaks | 14 | |
| Ants Bees and Wasps (Hymenoptera) | | | | |
| Biggs, D.T. | 2000 | A new Sawfly <i>Diprion simile</i> (Hartig) for Isle of Wight | 16 | |
| Blair, K.G. | 1953 | Some ant-like Hymenoptera of the Isle of Wight | 4 | 8 |
| Jeffery, H.G. | 1931 | The Formicidæ (or ants) of the Isle of Wight | 2 | 2 |
| Saunt, J.W. | 1955 | Observations on the Sand Wasp <i>Ammophila sabulosa</i> and others | 4 | 10 |
| Saunt, J.W. | 1956 | <i>Athalia cornubiae</i> , a rare sawfly taken in the Isle of Wight | 5 | 1 |
| West, R.M. | 1933 | The beetle-guests of British ants | 2 | 4 |
| Wright, A. | 2005 | A provisional annotated checklist of Isle of Wight aculeate Hymenoptera | 21 | |
| Beetles (Coleoptera) | | | | |
| Blair, K.G. | 1952 | A supplementary list of Coleoptera of the Isle of Wight | 4 | 7 |
| Jeffery, H.G. | 1921 | Supplement to Morey's 1909 Natural History of Isle of Wight (Coleoptera) | 1 | 2 |
| Jeffery, H.G. | 1927 | A third supplementary list of Coleoptera of the Isle of Wight | 1 | 8 |
| Jeffery, H.G. | 1935 | A fourth supplementary list (Coleoptera) with notes and emendations to former lists | 2 | 6 |
| Saunt, J.W. | 1947 | A beetle new to Britain | 4 | 2 |
| West, R.M. | 1930 | A plea for the study of Coleoptera | 2 | 1 |

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| West, R.M. | 1935 | List of some named varieties of Coleoptera occurring in Isle of Wight | 2 | 6 |
| Butterflies and moths (Lepidoptera) | | | | |
| Blair, K.G. | 1951 | The wainscot moths of Freshwater Marsh | 4 | 6 |
| Butler, A. & Wright, A. | 2005 | Historical & current status & distribution of rare "fritillary" butterflies, Isle of Wight The yellow-legged clearwing moth (<i>Synathedon vespiformi</i>) a new site for the Isle of | 21 | |
| Butler, A.J. | 1998 | Wight | 14 | |
| Cheverton, J.M. | 1986 | Early sightings of the painted lady (<i>Vanessa cardui</i>) | 8 | 1 |
| Cheverton, J.M. & Pelham, C.N. | 1988 | Current status of Isle of Wight moths | 8 | 3 |
| Colenutt, S.R. | 1997 | Pyalidae. <i>Evergestis limbata</i> a species new to mainland Britain | 13 | |
| Cramp, P. | 1990 | Additions to the status of the Isle of Wight moths | 10 | |
| Dickson, R. | 1977 | An interesting moth on an interesting foodplant | 7 | 2 |
| Ford, R.L.E. | 1976 | Spiral rotation in the larva of <i>Pieris brassicae</i> | 7 | 1 |
| Jeffery, H.G. | 1928 | A supplementary List (Lepidoptera) additional to Morey 1909 & Proceedings 1921 | 1 | 9 |
| Knill-Jones, R. | 1956 | Capture of <i>Notodonta phoebe</i> & <i>Vanessa huntera</i> in the Isle of Wight | 5 | 1 |
| Lobb, J. | 1958 | Notes on breeding the waved black moth (<i>Parascotia fulginaria</i>) | 5 | 3 |
| Lobb, J. | 1960 | A preliminary survey of the Lepidoptera of Newtown, Hamstead & Cranmore | 5 | 5 |
| Lobb, J. | 1961 | A survey of Newtown, Hamstead & Cranmore (Lepidoptera) | 5 | 6 |
| Lobb, J. | 1962 | A survey of the Lepidoptera of Newtown, Hamstead & Cranmore | 5 | 7 |
| Poole, H. F. | 1921 | Additions to the Isle of Wight list (Lepidoptera) | 1 | 2 |
| Pope, C.R. | 1983 | Glanville fritillary survey | 7 | 8 |
| Pope, C.R. | 1987 | The status of the Glanville fritillary on the Isle of Wight | 8 | 2 |
| Pope, C.R. | 1999 | The natural history of the Glanville fritillary butterfly | 15 | |
| Waring, P. | 1989 | 1998 survey of the reddish buff moth (<i>Acosmetia caliginosa</i>) on the Isle of Wight | 9 | |
| Warne, B. | 1998 | Discovery of the Channel Island pug (<i>Eupithecia ultimaria</i>) on the Isle of Wight | 14 | |
| Warne, B. | 1998 | Wine ropes: a means of attracting Lepidoptera | 14 | |
| Warne, B. | 1999 | Searching for the larvae of various pug moth species | 15 | |
| Warne, B. | 2000 | More species of pug moth discovered | 16 | |
| Butterflies and moths annual reports | | | | |
| Angell, B. | 1990 | Butterfly records from the Isle of Wight 1989 | 10 | |
| Knill-Jones, S.A. | 1990 | The emergence of butterflies & moths in 1989 | 10 | |
| Angell, B. | 1991 | Isle of Wight butterfly records for 1990 | 11 | |
| Angell, B. | 1992 | Butterfly records from the Isle of Wight 1991 | 12 | |
| Knill-Jones, S.A. | 1992 | Noteworthy butterflies & moths recorded at Freshwater 1992 | 12 | |
| Knill-Jones, S.A. | 1997 | Notable moths taken in the Isle of Wight during 1994-5 | 13 | |
| Knill-Jones, S.A. & Angell, B. | 1997 | Rare migrant butterflies recorded on the Isle of Wight during 1995 | 13 | |
| Angell, B. | 1998 | Butterfly records from the Isle of Wight 1997 | 14 | |
| Knill-Jones, S.A. | 1998 | Notable moths recorded in Isle of Wight during 1996 & 1997 Notable moths recorded in Isle of Wight in 1998 including a pyralid new to | 14 | |
| Knill-Jones, S.A. | 1999 | Britain | 15 | |
| Angell, B. | 2000 | Butterfly records from the Isle of Wight 1999 Moths recorded in 1999 in the Isle of Wight including a Noctuid new to | 16 | |
| Knill-Jones, S.A. | 2000 | mainland Britain | 16 | |
| Warne, B. | 2000 | National moth night 1999 | 16 | |
| Knill-Jones, S.A. | 2001 | Notable moths recorded in the Isle of Wight during 2000 | 17 | |
| Knill-Jones, S.A. | 2002 | Notable moths recorded in the Isle of Wight during 2001 | 18 | |
| Knill-Jones, S.A. | 2003 | Notable moths recorded in the Isle of Wight during 2002 | 19 | |

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| Knill-Jones, S.A. | 2004 | Notable moths recorded in the Isle of Wight during 2003 | 20 | |
| Knill-Jones, S.A. | 2005 | Notable moths recorded in the Isle of Wight during 2004 | 21 | |
| Butler, A. | 2007 | Isle of Wight butterfly records for 2006 | 22 | |
| Knill-Jones, S.A. | 2007 | Moths recorded during 2006 including one macro new to Britain | 22 | |
| Knill-Jones, S.A. | 2007 | Notable moths in the Isle of Wight during 2005 | 22 | |
| Damselflies and dragonflies (Odonata) | | | | |
| Cheverton, J.M. | 1987 | Odonata of the Isle of Wight | 8 | 2 |
| Cheverton, J.M. | 1997 | Provisional atlas of the Odonata of the Isle of Wight | 13 | |
| | | Small red-eyed damselfly <i>Erythromma viridulum</i> a new species for Isle of | | |
| Dana, D. | 2001 | Wight | 17 | |
| Damselflies and dragonflies annual reports | | | | |
| Cheverton, J.M. | 1992 | Damselflies & Dragonflies, 1992 | 12 | |
| Cheverton, J.M. | 1997 | Odonata records 1993 - 1995 | 13 | |
| Cheverton, J.M. | 1998 | Odonata records for 1996 & 1997 | 14 | |
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| Fleas | | | | |
| Jeffery, H.G. | 1922 | Pulicidae (Fleas) | 1 | 3 |
| Grasshoppers and Lacewings (Orthoptera and Neuroptera) | | | | |
| Blair, K.G. | 1948 | Supplementary lists for Isle of Wight Orthoptera & Neuroptera | 4 | 3 |
| Blair, K.G. | 1950 | Neuroptera of the Isle of Wight | 4 | 5 |
| True flies (Diptera) | | | | |
| Blair, K.G. | 1951 | The mosquitoes of Freshwater Marsh | 4 | 6 |
| Ford, R.L.E. | 1976 | Dipterous parasites of ladybirds | 7 | 1 |
| Saunt, J.W. | 1946 | Isle of Wight Trypetidae | 4 | 1 |
| Telfer, D. | 1992 | A provisional list of Diptera of Isle of Wight | 12 | |
| Wright, A.S. | 2001 | Some recent additions to the list of Diptera of the Isle of Wight | 17 | |
| True Bugs (Hemiptera) | | | | |
| Biggs, D.T. | 1997 | Additions to the Hemiptera fauna of Isle of Wight | 13 | |
| Biggs, D.T. | 1998 | New Vice-County records for Hemiptera | 14 | |
| Biggs, D.T. | 2001 | New Vice County records for Hemiptera | 17 | |
| Gall causers | | | | |
| Biggs, D.T. | 1976 | <i>Andricus quercus-calicis</i> -- a new gall on the Island | 7 | 1 |
| Biggs, D.T. | 1987 | Alien galls and the media | 8 | 2 |
| Biggs, D.T. | 1987 | Cecidology on the Isle of Wight | 8 | 2 |
| Biggs, D.T. | 1988 | Additional records of plant galls from Isle of Wight | 8 | 3 |

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| Biggs, D.T. | 1997 | Additional records of plant galls from Isle of Wight | 13 |
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| Biggs, D.T. | 2005 | Additional records of plant galls from Isle of Wight | 21 |
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| Biggs, D.T. | 2007 | Additional records of plant galls from the Isle of Wight | 22 |
| Biggs, D.T. | 2007 | Mite galls on the Isle of Wight | 22 |
| Biggs, D.T. | 2007 | Additional records of plant galls from the Isle of Wight | 22 |
| Blair, K.G. | 1952 | The Reed gall | 4 7 |
| Swanton, E.W. | 1937 | A preliminary annotated list of plant galls observed in the Isle of Wight | 2 8 |

Leaf Miners

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| Biggs, D.T. | 1997 | The study of leaf mines & miners on Isle of Wight | 13 |
| Biggs, D.T. | 1998 | Leaf-mining organisms not previously recorded on the Isle of Wight | 14 |
| Biggs, D.T. | 1999 | Leaf-mining organisms not previously recorded on the Isle of Wight | 15 |
| Biggs, D.T. | 2000 | Leaf-mining organisms not previously recorded on the Isle of Wight | 16 |
| Biggs, D.T. | 2003 | Leaf-mining organisms not previously recorded on the Isle of Wight | 19 |
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| Biggs, D.T. | 2007 | Leaf-mining organisms not previously recorded on the Isle of Wight 2006 | 22 |

Myriapods

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| Keay, A.N. | 1978 | Centipedes in the Isle of Wight | 7 3 |
| Keay, A.N. | 1987 | <i>Trachysphaera lobata</i> Ribault, a millipede new to Britain from Bembridge | 8 2 |

Spiders

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| Bingham, P., Cooney, K., and Jones, D. | 1999 | Public health response to spider bites & a new species to the Isle of Wight | 15 |
| Falconer, W. | 1931 | New & additional records Isle of Wight Arachnida | 2 2 |
| Jones, R.E. | 1981 | Some recent records of Isle of Wight pseudoscorpion | 7 6 |
| Millidge, A.F. | 1958 | Spiders including a list of those recorded from the Isle of Wight | 5 3 |
| Pope, C.R. | 1998 | The wasp spider <i>Argiope bruennichi</i> (Scolopi) on the Isle of Wight | 14 |
| Pope, C.R. | 2007 | Rare Island spider record | 22 |

Fungi

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| Frazer, O.H. | 1968 | A large bracket fungus: correction | 6 3 |
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| Rayner, J. F. | 1920 | New Records and localities & additional locations of fungi already recorded | 1 | 1 |
| Rayner, J. F. | 1922 | Species (of fungi) hitherto unrecorded for the Island | 1 | 3 |
| Rayner, J. F. | 1927 | Supplementary list (fungi) to Morey 1909 & Proceedings Vol 1 Parts 1 & 3 | 1 | 8 |
| Reid, D.A. & Pope, C.R. | 1991 | The occurrence of <i>Amanita ovoidea</i> on the Isle of Wight | 11 | |
| Stafford, J. | 1967 | A large bracket fungus at Brighstone | 6 | 2 |
| Swanton E.W. | 1934 | List of fungi found in the Isle of Wight | 2 | 5 |

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| Frazer, O.H. | 1986 | Additions to the fungi of the Isle of Wight 1984 & 1985 | 8 | 1 |
| Frazer, O.H. | 1987 | Additions to the fungi of the Isle of Wight 1986 | 8 | 2 |
| Frazer, O.H. | 1988 | Additions to the fungi of the Isle of Wight 1987 | 8 | 3 |
| Frazer, O.H. | 1989 | Additions to the fungi of the Isle of Wight 1988 | 9 | |
| Frazer, O.H. | 1990 | Additions to the fungi of the Isle of Wight 1989 | 10 | |
| Frazer, O.H. | 1991 | Additions to the fungi of the Isle of Wight 1990 & 1991 | 11 | |
| Frazer, O.H. | 1992 | Additions to the fungi of the Isle of Wight 1992 | 12 | |
| Carr, D.A. | 1998 | Fungi new to the Isle of Wight 1993-1997 | 14 | |
| Carr, D.A. | 1999 | Fungi new to the Isle of Wight 1998 | 15 | |
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| Hart, J. | 2007 | Fungi new to the Isle of Wight 2006 | 22 | |

Lichens

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| Knight, H.H. | 1932 | A revised and enlarged list of the lichens of Isle of Wight | 2 | 3 |
| Pope, C.R. | 1973 | Some aspects of lichen distribution | 6 | 8 |
| Pope, C.R. | 1976 | Notes on the lichens of the Isle of Wight | 7 | 1 |
| Pope, C.R. | 1983 | A lichen flora of the Isle of Wight | 7 | 8 |

Plants

Bryophytes

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|--------------|------|--|----|---|
| Livens, H.M. | 1926 | Hepatics Supplementary list to Morey 1909 | 1 | 7 |
| Livens, H.M. | 1926 | Mosses Supplementary list to Morey 1909 | 1 | 7 |
| Snow, L. | 1977 | Rediscovery of a rare moss (<i>Philonotis marchica</i>) at Shanklin | 7 | 2 |
| Snow, L. | 1989 | Provisional atlas of the Bryophytes of the Isle of Wight: Liverworts | 9 | |
| | | Provisional atlas of the Bryophytes of the Isle of Wight: Mosses: Part 1 <i>Sphagna</i> - | | |
| Snow, L. | 1992 | <i>Grimmiales</i> | 12 | |
| Snow, L. | 1997 | Hepatic Records 1988-1995 | 13 | |
| | | Provisional atlas of the Bryophytes of the Isle of Wight: Mosses: Part 2 <i>Funariales</i> - | | |
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| Powell, G.H. | 1979 | Granaries on staddlestones in the Isle of Wight | 7 | 4 |
| Powell, G.H. | 1980 | Further notes on the Isle of Wight granaries | 7 | 5 |

History

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| Adams, R.H. | 1960 | Agricultural history of the Isle of Wight | 5 | 5 |
| Benson, G.C. | 1950 | Appuldurcombe Manor | 4 | 5 |
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| Black, F. W. | 1929 | Carisbrooke Castle & the govenors of Isle of Wight in 15th century | 1 | 10 |
| Frazer, O.H. | 1991 | The history of "Local Look" | 11 | |
| Hockey, S.F. | 1956 | The recruitment of Quarr Abbey 1132-1536 | 5 | 1 |
| Hockey, S.F. | 1965 | Who was the wife of Sir John Leigh -- Agnes, Mary or Anne ? | 5 | 10 |
| Hughes, J.C. | 1928 | Yarmouth town accounts for 1646 | 1 | 9 |
| Hughes, J.C. | 1934 | A Brading deed of the 13th Century | 2 | 5 |
| Hutchinson, A.L. | 1969 | The golden jubilee of the Society | 6 | 4 |
| Jones, J.D. | 1965 | The Isle of Wight and the revolution of 1668 | 5 | 10 |
| Jones, J.D. | 1968 | The Building of a fort at Sandown Isle of Wight 1632-1636 | 6 | 3 |
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| Poole, H. F. | 1935 | Natural History Museum | 2 | 6 |
| Sherwin, G.A. | 1935 | Some medieval documents of the Isle of Wight | 2 | 6 |
| Temple, N | 1987 | John Nash, some minor buildings in Isle of Wight. Part 1 | 8 | 2 |
| Temple, N. | 1988 | John Nash, some minor buildings in Isle of Wight. Part 2 | 8 | 3 |
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| Margham, J.N. | 1982 | Isle of Wight village morphology Part 1 | 7 | 7 |
| Middleton, M.G. | 1986 | Isle of Wight field names 1835-1848 | 8 | 1 |
| Smout, R. | 2000 | see Basford, V. Smout, R. <i>et al</i> | 16 | |

Obituaries (arranged by date of publication)

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|---|------|---|---|
| Frank Morey F.L.S. 1858-1925 | 1925 | 1 | 6 |
| James Groves F.L.S. 1858-1933 | 1933 | 2 | 4 |
| Reginald H. Fox | 1933 | 2 | 4 |
| Lieut-Col .R.M. West, D.S.O. O.B.E. M.D., F.R.E.S | 1936 | 2 | 7 |
| Captain Arthur John Parish C.B., C.B.E., R.N., M.A. | 1942 | 3 | 5 |
| Gerald Ambrose Sherwin F.S.A. | 1942 | 3 | 5 |
| Catherine Morey 1855-1943 | 1942 | 3 | 5 |
| Sir Edward Poulton K.B.E., M.A., LL.D., D.Sc., F.R.S. | 1943 | 3 | 6 |
| George William Colenutt F.G.S. | 1944 | 3 | 7 |
| Percy Long | 1944 | 3 | 7 |
| Hubert Frederick Poole | 1945 | 3 | 8 |
| Lionel Ernest Adams | 1945 | 3 | 8 |
| Percy Frank Wadham | 1945 | 3 | 8 |
| F. Snow | 1946 | 4 | 1 |
| H.B. Maufe F.G.S. | 1946 | 4 | 1 |
| R.Y. Marvin | 1946 | 4 | 1 |
| Rev. H.M. Livens M.A. | 1946 | 4 | 1 |
| Hugh Geoffrey Jeffery | 1947 | 4 | 2 |
| William Charles Dotesio | 1947 | 4 | 2 |
| John Dover M.A., F.R .Met.S. | 1948 | 4 | 3 |
| Rev. E.A. Sydenham M.A., F.R.N.S. | 1948 | 4 | 3 |
| Miss E. Witham | 1949 | 4 | 4 |
| Mr A.S. Kennard F.G.S. | 1949 | 4 | 4 |
| Sir Vere Hobart BART. | 1949 | 4 | 4 |
| Arthur Hogan, I.S.O., M.B.E. | 1950 | 4 | 5 |
| George William Arthur Sloacombe | 1950 | 4 | 5 |
| A. Barton Woodyear | 1951 | 4 | 6 |
| Claude Morley F.R.E.S., F.G.S., F.Z.S. | 1951 | 4 | 6 |
| Horace St. John Kelly Donistorpe | 1951 | 4 | 6 |
| Miss B.C. Thornycroft | 1951 | 4 | 6 |
| Frank Rowley F.R.M.S. | 1952 | 4 | 7 |

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| Frederick Stroh | 1952 | 4 | 7 |
| Kenneth Gloyne Blair D.Sc. | 1952 | 4 | 7 |
| John Cowper M.B., C.M. | 1953 | 4 | 8 |
| Miss M.F. Barton | 1953 | 4 | 8 |
| Gordon Edward Fowler, M.A., F.S.A. | 1953 | 4 | 8 |
| John Smith Kitching | 1953 | 4 | 8 |
| Mrs Emily Frederica Rowley | 1954 | 4 | 9 |
| William Stanley Saunders | 1954 | 4 | 9 |
| Miss Grace Brandon | 1954 | 4 | 9 |
| Francis Alan Stiles | 1955 | 4 | 10 |
| George Vernon Upward | 1955 | 4 | 10 |
| William Baxter Nicoll | 1956 | 5 | 1 |
| Arthur Selwyn Hayward | 1956 | 5 | 1 |
| Lady Baldwin, J.P. | 1956 | 5 | 1 |
| Miss L.E.Cox | 1956 | 5 | 1 |
| Frank Mozart Walker, B.A. | 1957 | 5 | 2 |
| Francis Henry James Damp, M.C. | 1957 | 5 | 2 |
| John William Saunt, A.L.S. | 1958 | 5 | 3 |
| Ernest Herbert White, M.B.O.U., F.R.H.S. | 1959 | 5 | 4 |
| Miss Vera Fisk | 1960 | 5 | 5 |
| Mr W.E.Cox, C.B.E. | 1960 | 5 | 5 |
| Sir John E. Thornycroft, K.B.E. | 1960 | 5 | 5 |
| Miss E.White | 1961 | 5 | 6 |
| Mr Evelyn William Pollard, B. Sc | 1961 | 5 | 6 |
| Mr E. ST. John Burton, | 1962 | 5 | 7 |
| Captain Guybon Chesney Castell Damant, O.B.E., R.N. (Retd.)) | 1963 | 5 | 8 |
| Wilson Ray Frazer, O.B.E. | 1963 | 5 | 8 |
| John Lobb | 1963 | 5 | 8 |
| George Frederick Mew B.E.M., C.A. | 1964 | 5 | 9 |
| Stanley Frederick Ball | 1964 | 5 | 9 |
| Aleck Westrup | 1964 | 5 | 9 |
| Edward Whitaker Marvin | 1965 | 5 | 10 |
| Arthur John Henry | 1965 | 5 | 10 |
| Grace Haldane Frazer | 1966 | 6 | 1 |
| Mr J.F.Jackson, F.G.S. | 1966 | 6 | 1 |
| Mrs A.E. Williams | 1966 | 6 | 1 |
| Ronald Joseph Machin | 1971 | 6 | 6 |
| Professor John Milne F.R.S., F.G.S. 1850-1913 | 1973 | 6 | 8 |
| Arthur Leslie Hutchinson | 1974 | 6 | 9 |
| Gerald Clough Dunning F.S.A. | 1978 | 7 | 3 |
| Clarice Ellen Richardson | 1979 | 7 | 4 |
| Stanley T Waite, B.Sc. | 1979 | 7 | 4 |
| Gladys Hilda Dorothy Bullock | 1980 | 7 | 5 |
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