Nettlecombe Court and Old Weather Station Field: Grassland Fungi Assessment 2020

First published July 2021

Natural England Research Report NERR098

www.gov.uk/natural-england

Natural England Research Report NERR098

Nettlecombe Court and Old Weather Station Field: Grassland Fungi Assessment 2020

A.McLay

July 2021

ISBN: 978-1-78354-771-5

Project details

This report should be cited as: McLay, A. 2021. *Nettlecombe Court and Old Weather Station Field: Grassland Fungi Assessment 2020.* Natural England Commissioned Report NECR363. Natural England.

Natural England Project manager

Mike Pearce

Author

A.McLay

Keywords

Nettlecombe Park, grassland, grassland fungi, SSSI

Further information

This report can be downloaded from the Natural England Access to Evidence Catalogue: **http://publications.naturalengland.org.uk/** . For information on Natural England publications contact the Natural England Enquiry Service on 0300 060 3900 or e-mail **enquiries@naturalengland.org.uk**.

Nettlecombe Court and Old Weather Station Field

Grassland Fungi Assessment

January 2020

Ref: NEFU2018-221

Author: A.McLay

Checked: Dr A.Jukes

Natural England Field Unit

CONTENTS

Background

Nettlecombe Court is situated on the northern fringes of the Brendon Hills in West Somerset and lies within Exmoor National Park. The Court itself now functions as a Field Studies Centre, the grounds of which contain a series of formal old lawns and adjacent parkland habitat. Part of the landholding lies within Nettlecombe Park SSSI, an important example of an ancient deer park supporting a large collection of veteran trees with rich associated lichen and invertebrate communities. The Old Weather Station Field is situated approximately 1.5km south of Nettlecombe Court and has a north-facing sloping aspect. The sheep-grazed pasture contains a small enclosed meteorological station maintained by FSC staff. Most of the land within the vicinity of Nettlecombe Court is within the ownership of Nettlecombe Estates Ltd. A plan of the site showing the key survey locations can be found in Appendix 1.

The significance of the site for waxcaps and other declining grassland fungi was first highlighted by Richard Thompson whilst carrying out a series of waxcap grassland surveys for Somerset Environmental Records Centre (SERC) in the period 1997-1999. Thompson's report (2000) separately detailed the findings of surveys carried out at Nettlecombe Court and the Old Weather Station Field and showed that both sites were then of national importance for their waxcap fungi populations, with totals of 18 and 23 species respectively recorded. At that time the count of 23 waxcap species from the Old Weather Station Field was known to be the second highest in the county and was only exceeded by Pinkworthy on Exmoor. Furthermore the pasture was cited to support more "notable" grassland fungi species than any other site in Somerset. This latter statistic was based upon research by Maurice Rotheroe (1996) who had previously produced a list of species deemed to be most indicative of quality waxcap grassland sites in the UK.

Old Weather Station Field

The precise details of all of Richard Thompson's findings at Nettlecombe prior to 2000 are held by Somerset Environmental Records Centre and were not accessed for inclusion within this report. However a search of the BMS Fungal Records Database produced an extensive list of recorded finds including grassland fungal records dating from the period 1997-2000 when Thompson was most active in the region. Not all of these records are locality-specific but it is apparent that a good number of records of grassland species clearly relate to the series of formal lawns in close proximity to the Field Studies Centre.

Since 2009 further regular recording of grassland fungi has taken place at Nettlecombe and this data is held by both FSC staff and Natural England. Following this survey effort the site has been identified by Natural England as a proposed SSSI for its grassland fungi assemblage. The present surveys took place in 2017 and 2018 and were carried out to ascertain whether the site fully met the recently revised SSSI criteria (JNCC 2018) for grassland fungi. The findings (both historic and current) are therefore detailed within this report and an updated site evaluation is also provided.

Introduction

The term "waxcap grassland" was coined relatively recently to describe semi-natural grassland habitats containing distinctive assemblages of fungi, including waxcaps (*Hygrocybe* species). Waxcaps are a group of fungi characterised by having thick waxy brittle gills, often bright colours and a preference for growing in unfertilised pastures or lawns. A waxcap grassland also frequently contains representatives of several other key grassland fungi groups, of which the clubs and corals (*Clavariaceae* family), earthtongues (*Geoglossaceae*) and pinkgills belonging to the genus *Entoloma* are the most prominent. Collectively these groups are often referred to as CHEGD fungi, an acronymn derived from their initials. Additional grassland fungi representatives from the genera *Dermoloma*, *Porpoloma* and *Camarophyllopsis* are also included as honorary CHEGD fungi. The common factor linking these fungi groups is their requirement for nutrient-poor soil types, i.e. agriculturally unimproved grasslands. Such grasslands have usually received little or no input from modern agricultural nitrogen-based fertilisers and frequently support a semi-natural sward with fine-leaved grass species such as *Festuca ovina, Agrostis capillaris* and *Anthoxanthum odoratum*. A well-developed moss layer is almost always present and usually contains the widespread grassland moss species *Rhytidiadelphus squarrosus*. Waxcap grasslands usually have a well-grazed sward that is maintained by regular livestock browsing or frequent mowing.

Survey methodology

On each visit the targeted grasslands were walked over in their entirety and all CHEGD fungal species found were recorded with their precise position noted by GPS (unless a species was present in large numbers within a small area). Notes were taken concerning the distribution and abundance of fruiting bodies of species within the grasslands and observations made with regard to habitat condition and any other evident grassland management issues. A photographic record was also compiled for this report.

The fieldwork was carried out by the Natural England Field Unit on October 12th and November 13th 2017 and then on September 27th and October 11th 2018. This report was compiled by Andy McLay.

Findings

A collective total of 16 waxcap species was recorded from the survey sites during the 4 site visits and these are listed in Table 1 below. In light of recent taxonomical changes which have resulted in the splitting of the genus *Hygrocybe*, the table includes both old and new Latin names together with the common names of the species. Table 2 lists the specific locations of each species found within the site.

Latin Name (old)	Latin Name (new)	Common Name
Hygrocybe aurantiosplendens	*Hygrocybe aurantiosplendens*	Orange Waxcap
Hygrocybe calyptriformis	*Porpolomopsis calyptriformis*	Pink Waxcap
Hygrocybe ceracea	*Hygrocybe ceracea*	Butter Waxcap
Hygrocybe chlorophana	*Hygrocybe chlorophana*	Golden Waxcap
Hygrocybe citrinovirens	*Hygrocybe citrinovirens*	Citrine Waxcap
Hygrocybe coccinea	*Hygrocybe coccinea*	Scarlet Waxcap
Hygrocybe conica var. conica	*Hygrocybe conica*	Blackening Waxcap
Hygrocybe insipida	*Hygrocybe insipida*	Spangle Waxcap
Hygrocybe irrigata	*Gliophorus irrigatus*	Slimy Waxcap
Hygrocybe pratensis var. pratensis	*Cuphophyllus pratensis*	Meadow Waxcap
Hygrocybe psittacina var. psittacina	*Gliophorus psittacinus*	Parrot Waxcap
Hygrocybe punicea	*Hygrocybe punicea*	Crimson Waxcap
Hygrocybe quieta	*Hygrocybe quieta*	Oily Waxcap
Hygrocybe reidii	*Hygrocybe reidii*	Honey Waxcap
Hygrocybe splendidissima	*Hygrocybe splendidissima*	Splendid Waxcap
Hygrocybe virginea	*Cuphophyllus virgineus*	Snowy Waxcap

Table 1.

Species	Weather Station Field (not SSSI)	Nettlecombe Court Lawns (not SSSI)	Nettlecombe Court Slope (SSSI)	Nettlecombe Churchyard
Cuphophyllus pratensis	P		P	
Cuphophyllus virgineus		P	P	
Gliophorus irrigatus	P	P		
Gliophorus psittacinus	P	P	P	
Hygrocybe aurantiosplendens	P			
Hygrocybe ceracea	P	P		P
Hygrocybe chlorophana	P	P	P	P
Hygrocybe citrinovirens	P			
Hygrocybe coccinea		P		
Hygrocybe conica var. conica		P	P	P
Hygrocybe insipida		P	P	
Hygrocybe punicea	P			
Hygrocybe quieta		P	P	P
Hygrocybe reidii		P	P	
Hygrocybe splendidissima	P			
Porpolomopsis calyptriformis		P	P	

Table 2. Taxa in bold are "High Diversity Indicator Species"

The recent visits to Nettlecombe in 2017 and 2018 unfortunately coincided with periods of unseasonably dry weather resulting in lower than average numbers of fruiting fungi across the site. Most of the finds were made in 2017 when 15 of the 16 recorded waxcap species were noted. In 2018 an unusually low total of just 3 species was seen and this dearth of records was mirrored throughout the country. This situation can be attributed to the prolonged hot summer which resulted in parched soils and excessively dry vegetation well into the autumn season and beyond. Even during the more productive 2017 season only small numbers of fungi were recorded from the Old Weather Station Field, with 6 waxcap species being the highest count on any one visit. However it is noteworthy that 4 of the 9 waxcap species seen here are recognised "High Diversity Indicators" (see below) and their presence together is strongly suggestive of a rich CHEGD fungal assemblage. The 2017 finds of *Dermoloma cuneifolium* (Crazed Cap) and *Clavaria straminea* (Straw Club) here were similarly significant and the latter Nationally Scarce species is included as Near Threatened on the Red Data List of Threatened British Fungi (Evans 2006). The one highlight of the dry 2018 season was finding *Hygrocybe citrinovirens* (above) in the Old Weather Station Field on both visits of that year. This declining waxcap

Hygrocybe citrinovirens (Lemon-green waxcap)

species is included on the IUCN global list of threatened species where it is described as Vulnerable. It would appear to be an addition to the Nettlecombe species list, although it may have been recorded prior to 2000. The later November visit in 2017 additionally produced notable finds of *Hygrocybe splendidissima* and *H.punicea,* both of which are strongly associated with quality waxcap grassland sites. Additional finds from the previous surveys here are detailed in the chapter below.

On October 12th 2017 a count of 12 waxcap species was made from the lawns and adjacent slope at Nettlecombe Court. Notable finds included the pink waxcap *Porpolomopsis calyptriformis* (see below) which was seen on the main circular lawn in front of the Field Studies Centre and also on Court Slope. The latter grassland also produced *Dermoloma cuneifolium* and four members of the *Clavariaceae* family were noted on the lawns. Other grassland fungi typically associated with the CHEGD assemblage were also present. These included *Cordyceps militaris* (Scarlet Caterpillar Club), *Calocybe carnea* (Pink Domecap), *Cystoderma amianthinum* (Earthy Powdercap) and *Rickenella fibula* (Orange Mosscap). In addition a brief look at the adjacent St. Mary's churchyard produced a count of 4 waxcap species including *Hygrocybe quieta.*

Remarkably in 2018 no grassland fungi at all were recorded from the lawns, slope or churchyard (see Discussion)

***Porpolomopsis calyptriformis* (Pink Waxcap)**

Figures 1 and 2 below collectively show the precise locations of all CHEGD fungal records made during the present survey.

Figure 1. Nettlecombe Court Slope and Lawns

Figure 2. Old Weather Station Field

Site evaluation

Table 3 lists all CHEGD species recorded at Old Weather Station Field, Nettlecombe Court Slope, Nettlecombe Court Lawns and Nettlecombe Churchyard since 2009. The dates represent the most recent sightings of each species.

- **Species in red are unconfirmed records.**

CHEGD species	Weather Station Field (not SSSI)	Nettlecombe Court Slope (SSSI)	Nettlecombe Court Lawns (not SSSI)	Nettlecombe Churchyard
Waxcap species				
Cuphophyllus colemannianus			2011	
Cuphophyllus flavipes			2011	
Cuphophyllus fornicatus	2012		2010	
Cuphophyllus pratensis	2017	2017	2012	2013
Cuphophyllus russocoriaceus	2012		2013	
Cuphophyllus virgineus	2013	2017	2017	2013
Gliophorus irrigatus	2017		2017	
Gliophorus laetus		2009		
Gliophorus psittacinus	2017	2017	2017	2012
Hygrocybe acutoconica	2013		2013	
Hygrocybe aurantiosplendens	2017	2013		
Hygrocybe cantharellus	2013		2009	
Hygrocybe ceracea	2017	2013	2017	2017
Hygrocybe chlorophana	2018	2017	2017	2017
Hygrocybe citrinovirens	2018			
Hygrocybe coccinea	2013	2013	2017	
Hygrocybe conica var. conica	2013	2017	2017	2017
Hygrocybe glutinipes var. glutinipes		2011		
Hygrocybe helobia			2012	
Hygrocybe insipida		2017	2017	
Hygrocybe intermedia		2009		
Hygrocybe mucronella	2013		2013	2012
Hygrocybe punicea	2017	2010	2010	
Hygrocybe quieta	2012	2017	2017	2017
Hygrocybe reidii	2013	2017	2017	
Hygrocybe splendidissima	2017	2013		
Neohygrocybe ingrata		2011	2011	
Neohygrocybe ovina	2011		2013	
Porpolomopsis calyptriformis	2013	2017	2017	
Coral and club species				
Clavaria acuta				2010
Clavaria fragilis		2011	2017	2013
Clavaria fumosa	2013		2012	
Clavaria straminea	2017			
Clavulinopsis corniculata			2017	2012
Clavulinopsis fusiformis			2011	
Clavulinopsis helvola	2017	2017	2012	2012
Clavulinopsis laeticolor			2017	2010
Clavulinopsis luteoalba	2013	2017		
Clavulinopsis umbrinella			2013	
Ramariopsis kunzei	2010			
Pinkgill species				
Entoloma conferendum	2017		2012	2010
Entoloma papillatum			2010	

Entoloma rhombisporum			2012	
Entoloma sericellum			2010	
Earthtongue species				
Geoglossum sp.			2011	
Trichoglossum hirsutum				2010
Crazed Cap species				
Dermoloma cuneifolium	2017	2017	2010	

Table 3.

The CHEGD outcomes for each species group are summarised below in Table 4. The totals exclude two unconfirmed *Hygrocybe* (*s.l.*) species listed above.

- **C** – *Clavariaceae* (Fairy Clubs)
- **H** – *Hygrocybe* (Waxcaps)
- **E** – *Entoloma* (Pinkgills)
- **G** – *Geoglossaceae* (Earthtongues)
- **D** – *Dermoloma* (Crazed Caps), including *Camarophyllopsis* and *Pseudoporpoloma*

Site	C	H	E	G	D	Total
Old Weather Station Field	5	21	1	0	1	27
Nettlecombe Court Slope	3	16	0	0	1	20
Nettlecombe Court Lawns	7	22	4	2	1	36
Nettlecombe Churchyard	5	8	1	1	0	15
Nettlecombe Court (whole site)	**11**	**27**	**4**	**2**	**1**	45
JNCC group thresholds	**7**	**19**	**15**	**5**	**3**	

Table 4.

In response to the continuing widespread decline of waxcap grassland habitat throughout Northern Europe (Boertmann 1995), increased survey effort has taken place in recent years in an attempt to identify and conserve important grassland sites in the UK. In 2009 guidelines were first published by the JNCC outlining the required group thresholds for potential SSSI notifications of grasslands with significant mycological interest. These guidelines were revised in 2018 (Bosanquet et al. 2018) and the updated CHEGD thresholds for sites of national importance are shown above in Table 4.

According to the guidelines any site which meets or exceeds one or more of the group thresholds shown in Table 4 would be eligible for SSSI notification. It can be seen that the overall site count of 27 waxcap species (H) greatly exceeds the specified threshold of 19 required for a site of national importance. Analysis of Table 4 also shows that the site is additionally of national importance for the *Clavariaceae* (clubs and corals) family of CHEGD fungi (C), with a total of 11 representatives recorded to date, 7 species of which

have been found on the Court Lawns. Notable finds since 2009 have included *Clavulinopsis umbrinella, Clavulinopsis fusiformis* and *Clavaria fumosa* on the Croquet Lawn and *Ramariopsis kunzei* and *Clavaria straminea* from the Old Weather Station Field. Further survey is required to ascertain whether the site is equally significant for the remaining CHEGD fungi groups but the previous recording of two earthtongue species from the Court Lawns and adjacent churchyard would suggest that further finds are likely.

An additional simplified method of site assessment has also been devised solely for waxcap species. The following table (known as "Rald's Scale") can be used to evaluate the conservation importance of sites based upon their waxcap species counts;

Conservation value	**Total number of waxcap species**
Of international importance	22+ (17+ during a single visit)
Of national importance	17-21 (11-16 during a single visit)
Of regional importance	9-16 (6-10 during a single visit)
Of local importance	4-8 (3-5 during a single visit)
Of no importance	1-3 (1-2 during a single visit)

Interpretation of this table would clearly indicate that the grasslands at Nettlecombe Court are of international importance for their waxcap populations.

The JNCC guidelines also make provision for the selection of sites known to support populations of global IUCN Red List threatened taxa. At Nettlecombe the following 3 species (all listed as Vulnerable) are most relevant in this respect (note - the presence of *Neohygrocybe ingrata* is currently unconfirmed);

- *Hygrocybe citrinovirens* – Old Weather Station Field
- *Neohygrocybe ingrata* – Nettlecombe Court Lawns, Nettlecombe Court Slope
- *Porpolomopsis calyptriformis* – all sites

The guidelines also recognise a suite of CHEGD species considered to be strongly indicative of the better quality grassland sites. The majority of these "High Diversity Indicator" (HDI) species by default are now uncommon to rare due to the widespread loss of quality sites but a small number remain relatively frequent within the UK. Examples include *Hygrocybe punicea* and *H.splendidissima* which can both still be found in quantity on some English grassland sites but have nethertheless declined considerably in numbers. The actual count of HDI species present within a site can be used as a good indication of its conservation value and sites supporting five or more species are almost invariably of national importance (A.McLay pers.obs). The following HDI species recorded from within this site are listed below;

Latin Name (old)	Latin Name (new)	Common Name
Hygrocybe aurantiosplendens	*Hygrocybe aurantiosplendens*	Orange Waxcap
Hygrocybe calyptriformis	*Porpolomopsis calyptriformis*	Pink Waxcap
Hygrocybe citrinovirens	*Hygrocybe citrinovirens*	Citrine Waxcap
Hygrocybe colemanniana	*Cuphophyllus colemannianus*	Toasted Waxcap
Hygrocybe flavipes	*Cuphophyllus flavipes*	Yellow-foot Waxcap
Hygrocybe ingrata	*Neohygrocybe ingrata*	Dingy Waxcap
Hygrocybe intermedia	*Hygrocybe intermedia*	Fibrous Waxcap
Hygrocybe ovina	*Neohygrocybe ovina*	Blushing Waxcap
Hygrocybe punicea	*Hygrocybe punicea*	Crimson Waxcap
Hygrocybe splendidissima	*Hygrocybe splendidissima*	Splendid Waxcap

Table 5.

Future conservation effort at Nettlecombe Court should aim to maintain populations of all the above listed species.

***Hygrocybe aurantiosplendens* (Orange Waxcap)**

***Hygrocybe intermedia* (Fibrous Waxcap)**

Discussion

The paucity of records made during the present survey can be largely attributed to recent unfavourable weather patterns for grassland fungi in the south of England and is therefore not reflective of the current quality or condition of the grasslands at Nettlecombe Court. Indeed, the Old Weather Station Field was noted by the surveyors to be a particularly fine example of a potentially rich waxcap grassland site and was seen to contain a suitably grazed unimproved sward throughout with an abundant and well developed moss layer. Although recent records were few in number, the presence of notable species such as *Hygrocybe citrinovirens, H.aurantiosplendens, H.punicea* and *H.splendidissima* is highly indicative of the quality of the grassland and strongly suggestive of a rich CHEGD assemblage. The mycelia of grassland fungi are known to develop slowly within ancient swards over considerable time frames and there is no reason to assume that any recent decline or loss in the absence of modern records of fruiting bodies indicates a decrease in mycological interest, provided that there has been no evident habitat change.

As previously mentioned the lawns and adjacent slope of Nettlecombe Court failed to produce any fruiting grassland fungi in 2018 due to the parched conditions resulting from a protracted hot dry summer. However it was also apparent that the grassland sward on the Court Slope was unsuitably long in 2018 and displayed little evidence of recent grazing. The former fine sward of *Agrostis* and *Festuca* had been visibly reduced by the spread of coarse grasses such as *Holcus lanatus* and *Dactylis glomerata*. Given the significant

number of previous CHEGD finds here it is strongly recommended that livestock grazing is increased to achieve a suitably short sward during the period early September to late November.

Court Slope - October 2018

The significance of this unimproved slope within the wider parkland area was further highlighted in 2018 during an extended search of the Park for other potentially suitable habitat. This exercise confirmed that the majority of the Park grasslands have been previously improved agriculturally and therefore have limited potential for CHEGD fungi.

The Old Weather Station Field is a rare and fine example of an unimproved semi-natural grassland type which has become increasingly scarce and fragmented within lowland England in recent decades. An NVC survey of the field was carried out in July 2018 and confirmed the vegetation type as **U4 *Festuca ovina-Agrostis capillaris-Galium saxatile* grassland.** This unimproved acidic grassland community is recognised as a priority habitat type of conservation importance within lowland England and would itself form a selectable feature of the proposed SSSI. The associated CHEGD fungi assemblage here is of national importance. The future notification of this site as a SSSI for its grassland fungi assemblage is therefore strongly recommended.

The series of old unimproved lawns surrounding the Field Studies Centre would also easily qualify for SSSI status based upon their outstanding CHEGD fungi assemblage which includes a remarkable count of 22 waxcap species recorded since 2009. This total is one of the highest in England and is particularly noteworthy for such a small area (0.6 ha). Significant finds have included *Neohygrocybe ovina* (Blushing Waxcap), *Cuphophyllus flavipes* (Yellowfoot Waxcap) and *Hygrocybe intermedia* (Fibrous Waxcap). Whilst the current threat level to these grasslands must be deemed low the lawns would

nethertheless be highly susceptible to “improvement” should there be any future changes in ownership or management priorities.

The small churchyard of St.Mary’s at Nettlecombe lies directly adjacent to the FSC lawns and supports similar suitable unimproved habitat. 8 waxcap species and 5 members of the *Clavariaceae* have been recorded here since 2009 and one of only two recorded sightings of earthtongue species at Nettlecombe was made here in 2010 when *Trichoglossum hirsutum* was found.

The “Croquet Lawn” in July 2018.

The Court Slope lies within the existing Nettlecombe Park SSSI. However it should be noted that this designation does not formally recognise the conservation importance of the grassland habitat and its associated fungal interest. A total of 18 waxcap species (including two unconfirmed) has been recorded here since 2009 and it seems highly likely that with additional survey this grassland unit would also qualify as nationally-important for this group of fungi. The condition of the sward here in 2018 was in contrast to the 2017 photograph below which shows a more suitably tight and open sward capable of supporting fungal fruiting bodies. The current unfavourable condition of this grassland should however be viewed as temporary and could be reversed relatively quickly with the re-introduction of appropriate grazing.

Court Slope and adjacent lawn – October 2017

References

Boertmann, D. 1995. *The Genus Hygrocybe* (*Fungi of Northern Europe – 1).* Danish Mycological Society.

Boertmann, D. 2010. *The genus Hygrocybe*, 2nd revised edn. Fungi of Northern Europe 1. Danish Mycological Society.

Bosanquet, S, Ainsworth, M, Cooch, S, Genney, D and Wilkins, T. 2018. Guidelines for Selection of Biological SSSIs Chapter 14 Non-lichenised Fungi. Joint Nature Conservation Committee, Peterborough.

Evans, S. 2003. *Waxcap Grasslands – an assessment of English sites.* English Nature Research Report 555.

Evans, S. 2006. *Red Data List of Threatened British Fungi*, *second edition.* British Mycological Society.

Genney, D.R., Hale, A.D., Woods, R.G. and Wright, M. 2009. Guidelines for Selection of Biological SSSIs Chapter 18 Grassland Fungi. Joint Nature Conservation Committee, Peterborough.

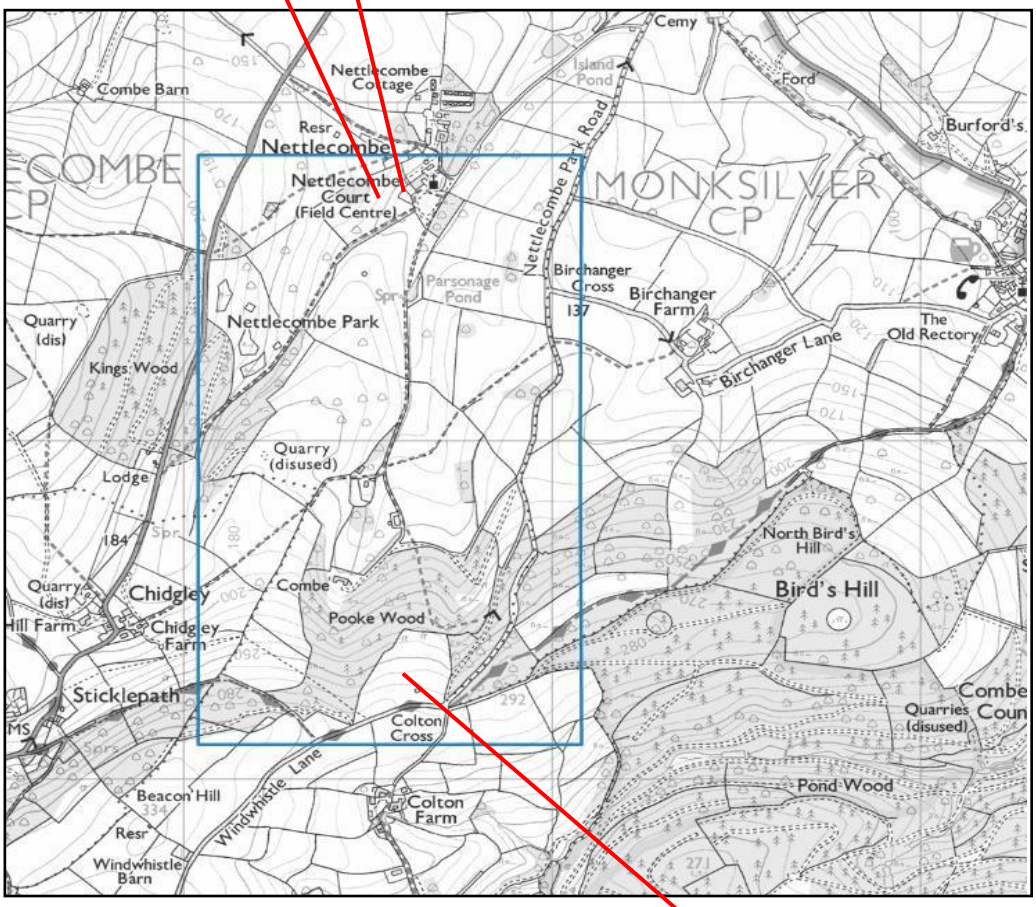
McLay, A. 2017. *Nettlecombe Park Grassland Fungi assessment.* Unpublished report to Natural England

Rotheroe, M. 1996. W*axcap Grassland Survey.* The Mycologist, 10, 23-25.

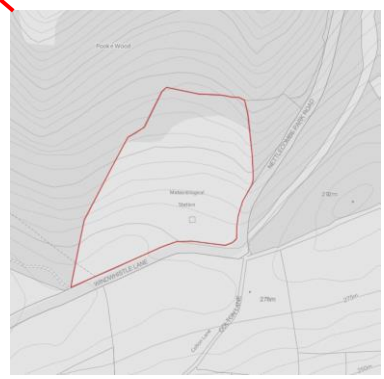
Thompson, R. 2000. *The Somerset Grassland Fungi Project 1997-1999.* Report to the Somerset Wildlife Trust by Somerset Environmental Records Centre.

Appendix 1. Location Map.

Nettlecombe Court Slope and Lawns



Old Weather Station Field



Appendix 2. Grid locations for notable species found during the present survey.

Species	Grid reference
Dermoloma cuneifolium	ST0566436344
Dermoloma cuneifolium	ST0555537707
Gliophorus irrigatus	ST0566436344
Gliophorus irrigatus	ST0561337717
Gliophorus irrigatus	ST0563436386
Hygrocybe aurantiosplendens	ST0566036305
Hygrocybe aurantiosplendens	ST0566436344
Hygrocybe citrinovirens	ST0553836293
Hygrocybe citrinovirens	ST0553136297
Hygrocybe splendidissima	ST0555136271
Porpolomopsis calyptriformis	ST0564937682
Porpolomopsis calyptriformis	ST0543137619

Natural England is here to secure a healthy natural environment for people to enjoy, where wildlife is protected and England's traditional landscapes are safeguarded for future generations.

Natural England publications are available as accessible pdfs from www.gov.uk/natural-england.

Should an alternative format of this publication be required, please contact our enquiries line for more information: 0300 060 3900 or email enquiries@naturalengland.org.uk.

ISBN 978-1-78354-771-5

Catalogue code: NERR098

NATURAL ENGLAND