

JNCC Report

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A survey of the mycoflora of British sand dunes 1991-1992

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Introduction

This survey represents a continuation of a number of studies carried out by the author on behalf of the Nature Conservancy Council between 1985 and 1990 (Rotheroe 1986; 1987a; 1987b; Rotheroe, Hedger & Savidge 1987; Rotheroe 1988; 1989; 1990 & 1991). The intention was to supplement these by fieldwork on sand dune nature reserves on the east coast of England and also at Braunton Burrows in Devon. It was hoped that the distribution of macrofungal species could be related to plant communities by use of the new National Vegetation Classification.

Methods

Similar field and laboratory methods were employed to those outlined in Rotheroe (1986).

Discussion

Fieldwork was carried out at Lindisfarne NNR, Gibraltar Point NNR, Saltfleetby and Theddlethorpe Dunes NNR and Braunton Burrows NNR.

NVC Codes

The author had not fully appreciated that there were a number of successive generations of National Vegetation Classification nomenclatures in existence. The definitive document containing full descriptions of community types relating to the codes for sand dune communities appears to be Rodwell (1989). However, even this reference does not include descriptions of the five dune slack communities - SD13, SD14, SD15, SD16, SD17 and their sub-divisions. The source of descriptive information on the dune slack groupings was therefore taken from the South Wales Dune Survey site report for Whiteford Burrows NNR (Dargie 1990). It should be noted that data originating in South Wales was largely instrumental in redefining the descriptions and final codes assigned to dune slacks. Dargie (1990) noted (p.13) that the nomenclature changed in the course of that survey and nomenclature and floristic tables had to be revised in the light of the changes. Dargie commented that "a wholesale revision of slack types had taken place, to the extent that field mapping could not in most cases be assigned to new units". He added: "To make matters worse, the computer groupings of slack communities in this survey did not closely agree with new or old types. All mapping of slack communities should therefore be regarded as very approximate".

So far as the present survey is concerned, the author was able to obtain an NVC site report and map for only the Lindisfarne reserve and these represented an earlier generation of community nomenclature and coding to that finally adopted. Because of these difficulties, only in the case of Lindisfarne was an attempt made to assign NVC codes to fungal species and this was done using the classification of Dargie (1990). It must be emphasised, therefore, that the codes used in Appendix 1 are also "very approximate" and do not correspond to the code numbers used on the Lindisfarne vegetation map of 1988.

NVC site reports for Braunton Burrows and Saltfleetby and Theddlethorpe reserves were not available and it is understood that Gibraltar Point NNR was not surveyed. For this reason, no attempt was made to apply NVC codes to species listed from these sites.

Results

The mycoflora of Lindisfarne NNR

An annotated list of species is given in Appendix 1. The number of species previously listed from this reserve was small, although it includes a number of unusual taxa. The previous records were authenticated by Dr Roy Watling of the Royal Botanic Gardens, Edinburgh. To assist in the use of the list, references are given for species descriptions in four of the most comprehensive and currently available books, with additional references for species not referred to in these main works.

This reserve seems to be particularly rich in species of the family Entolomataceae and in particular the genus *Leptonia*.

Special note should be made of a collection made of the rare species *Hebeloma vaccinum* Romagn, at Ross Links, which is not part of Lindisfarne NNR, but adjoins it. The first British record of this species was made during the British Mycological Society Autumn Foray based at Newcastle-upon-Tyne in 1971. A second British record in 1991 at Morfa Harlech NNR by the author. This fungus grows with *Salix repens* in dune slacks and although it has not yet been found on the Lindisfarne reserve, it should be searched for there. See distribution map (page 5).

Gibraltar Point NNR

As this reserve is relatively small and a somewhat atypical sand dune system, the long list of previous fungal records is remarkable and perhaps reflects the fact that the site has been subjected to many visits by mycologists in the past. A full species list, including those added in the present survey is given in Appendix 2.

Perhaps the most interesting species found here (in very inhospitable weather conditions on a weekend field excursion in February, 1992) was the agaric *Tubaria hiemale* (Romagn.: Bon) Moser, which is not on the British List and therefore probably represents a new British record, although a more thorough literature search than has presently been possible would be necessary to confirm this. It was also found at Saltfleetby on the same weekend.

Another unusual record was the collection of *Melanoleuca cinereifolia* Bon, a fungus which grows in bare sand in yellow dunes (*Ammophila arenaria* mobile dune community, typical sub-community - SD6d). It is usually found fruiting at the base of marram stems. It has so far been recorded only four times in Britain, with two records from the west coast, in Wales, and two from the east, in England. See distribution map (page 6).

It is noteworthy too that the bracket fungus *Phellinus hippophaëcola* (Aphlllophorales) is locally abundant both at this site and at Saltfleetby and Theddlethorpe Dunes. The species is absent from the west coast of Britain. This may well be due to the fact that its host,

Hippophaë rhamnoides (sea buckthorn) is native only on the east coast of Britain, from East Lothian to Sussex, although it has been planted and is well established on many west coast sand dune systems.

A question mark hangs over one species on the list of previous records for Gibraltar Point. *Conocybe tenera* was recently discovered to be an aggregate species and in the *sensu stricto* quite uncommon. It is probable that this previous record refers to *Conocybe dunensis* which is very common on sand dunes and was collected at this site by the author in the present survey.

Saltfleetby and Theddlethorpe Dunes NNR

No previous list of species was available for this reserve and the list given in Appendix 3, therefore, cannot be regarded as comprehensive. This site is potentially very interesting mycologically, apart from the records above, because it has extensive young, building yellow dunes at the Mablethorpe end. A number of rare fungal species (e.g. *Melanoleuca cinereifolia* above) appear to prefer this habitat, where *Ammophila arenaria* is in its most vigorous phase.

Braunton Burrows NNR

Only one weekend visit was possible to this site and, unfortunately, it coincided with a period of very dry weather. A good list of previous records is available for this site, largely because of work done there, mainly in the 1950's, by Messrs T.J. Wallace and P.D. Orton. A number of new species was added to their lists in the current survey - see Appendix 4. The comments made above in relation to the agaric *Conocybe tenera* are also applicable here. This is a large and well established dune system which has a rich potential mycologically. The list includes a number of species of *Inocybe*, one of the many genera which are mycorrhizal with *Salix* species and therefore well represented on sand dunes.

Synonymy

Because there have been a number of changes in nomenclature since the existing lists from some of the above sites were made, a short list of synonyms is given in Appendix 5.

Conclusions

Although the present survey was relatively restricted in its coverage, it has produced a number of new and interesting records and underlined, once more, the potential of the sand dune habitat, which has been largely neglected mycologically. Biological data on dune ecosystems is abysmally lacking in information on higher fungi. This is a serious omission in view of the major importance of the macrofungi in helping to establish and maintain dune systems, both by the physical action of the fungal hyphae in accretion of sand particles and in their only partially understood role as mycorrhizal symbionts of dune shrubs such as *Salix repens* and the major dune-building grasses such as marram *Ammophila arenaria*. It is hoped that further work will be possible to improve on the present state of knowledge regarding the macrofungal flora of important dune systems which have been relatively unexplored so far.

An aspect of fungal ecology which has not been fully investigated is the phenology of fruiting. As the author has observed previously (Rotheroe 1987b), a large number of species have been found to fruit outside the traditional "fungus seasons", i.e. spring and autumn. The very interesting records of the *Tubaria* species referred to above illustrate the importance of visiting sites at all times of the year if the full extent of the mycoflora is to be discovered.

References

Dargie, T.C. 1990: *National sand dune vegetation survey, South Wales dune survey. Site report No. 51, Whiteford Burrows*. Nature Conservancy Council.

Rodwell, J. 1989: *National vegetation classification, sand dune, strandline and shingle communities*. Nature Conservancy Council.

Rotheroe, M. 1986: *Ynyslas mycoflora survey, 1985*. Unpublished report for the Nature Conservancy Council.

Rotheroe, M. 1987a: *A comparative survey of the mycoflora of Welsh sand dunes, 1985, 1986 - a preliminary survey*. Unpublished report to the Nature Conservancy Council.

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Rotheroe, M., Hedger, J. & Savidge, J. 1987: The fungi of Ynyslas sand dunes - a preliminary survey. *The Mycologist 1:1*

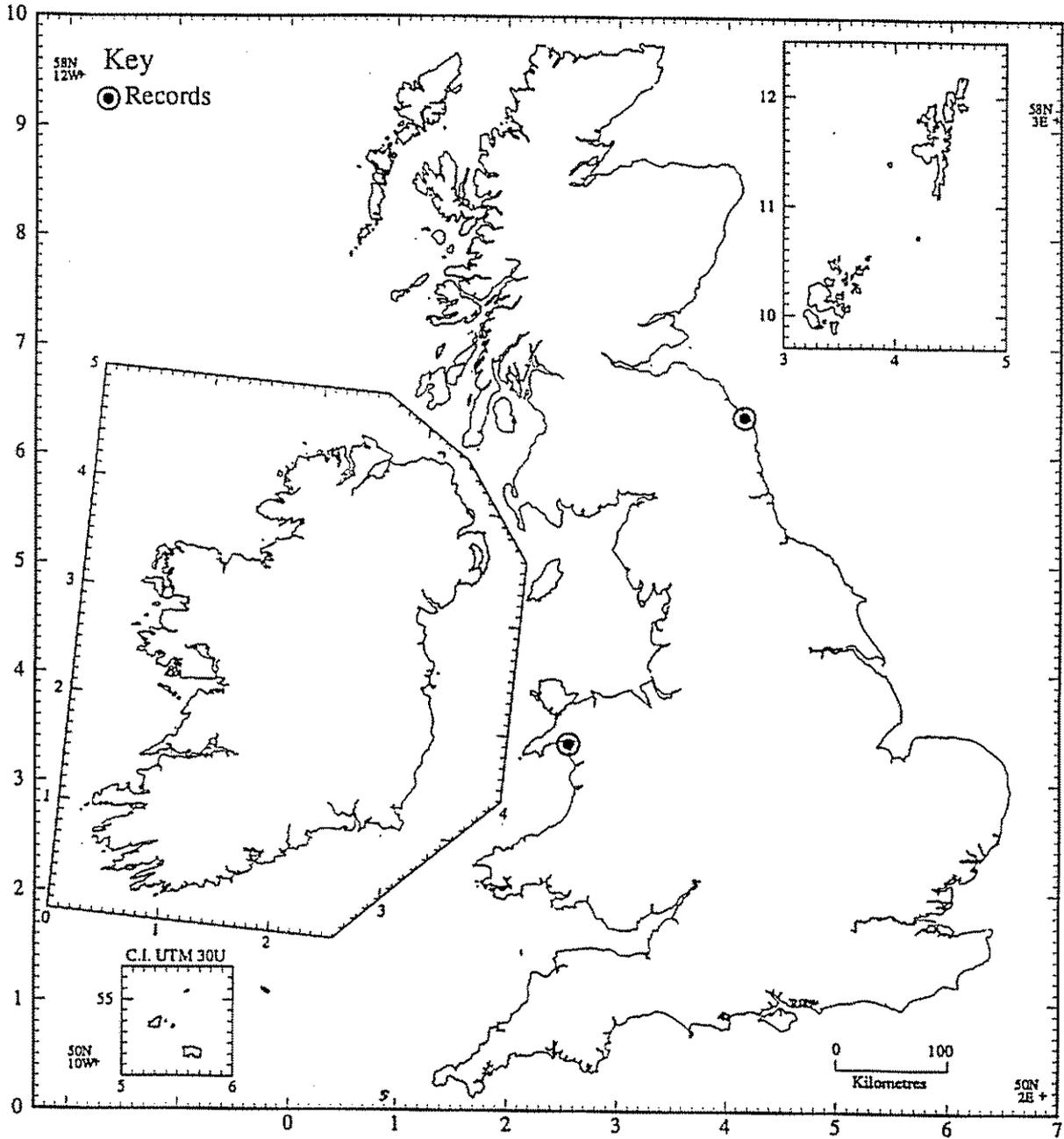
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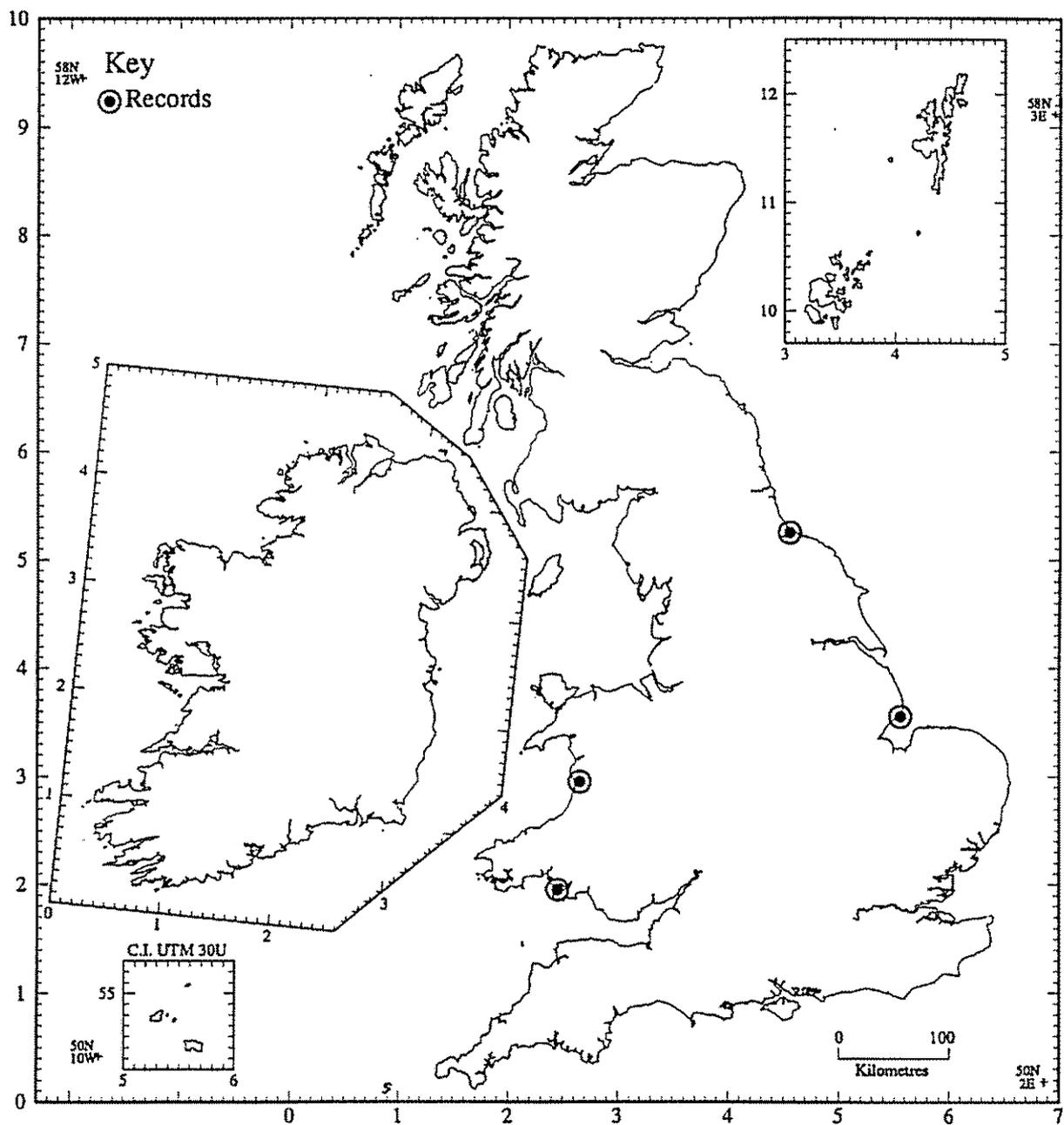
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Hebeloma vaccinum Romagn.
Records of Occurrence



Melanoleuca cinereifolia Bon
Records of Occurrence



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Dr Jerry Cooper, Academic Computing Service, The Open University, for providing computer generated distribution maps.

Messrs John Breeds, Stuart Hedley & K.M. Wilson for kindly supplying lists of species previously recorded at Braunton Burrows, Lindisfane and Gibraltar Point.

Appendix 1: Mycoflora of Lindisfarne NNR, annotated list of species

Arrangement of species information

The first line contains the name of the species, followed by author citation. The second line refers to any association with other organisms followed by the substrate. The third line describes the dune habitat followed by the NVC code. The fourth line gives bibliographical references of works containing descriptions of the species. The four main references are Bon (1987), Buczacki (1989), Lange & Hora (1961-1981) and Philips (1981). Other references are used only if the species concerned is not featured in one of these four volumes. (Numbers quoted are page numbers). Where necessary, the fifth line refers to the recording status of the species. Finally, reference is made to existing records for the site, identified by Dr Roy Watling of the Royal Botanic Garden, Edinburgh. Certain of these species were not recorded by the author. These are marked (RW Only).

Key to reference abbreviations in list

Main sources

- Bon Bon, M. (1987) *The mushrooms and toadstools of Britain and north-western Europe*. Hodder & Stoughton.
- Buc Buczacki, S. (1989) *Fungi of Britain and Europe*. Collins.
- LH Lange, M. & Hora, F.B. (1963, reprinted 1981) *Collins guide to mushrooms and toadstools*. Collins.
- RP Philips R. (1981) *Mushrooms and other fungi of Great Britain and Europe*. Pan.

Others

- BFF5 Watling, R. & Gregory, N.M. (1987) *British fungus flora pt5: Strophariaceae & Coprinaceae*. Royal Botanic Gardens, Edinburgh.
- Dennis Dennis, R.W.G. (1960) *British cup fungi and their allies*. London, Ray Society.
- Moser Moser, M. (1983) *Keys to agarics and boleti*. Roger Philips.
- Orton Orton, P.D. (1960) in *Trans. Br. Mycol. Soc.* 43.

BAŚIDIOMYCETES

Agaricales

Agaricus arvensis Schaeff.: Secr.
With Gramineae in sandy soil.
Dune grassland & slack SD8, SD14, SD15
Ref: Bon278, BUC148, LH134, RP167

Agaricus devoniensis Orton
With lichen or Bryophyta in bare sand.
Mobile & semi-fixed dunes SD6d/e, SD7
Ref: Buc146, RP163

Agaricus macrosporus (Møll. & Shaef.) Pilat
With Gramineae in sandy soil.
Dune grassland SD8
Ref: Bon278, Buc148, LH134, RP164

Agaricus semotus Fr.
With Gramineae in sandy soil.
Semi-fixed dune & slack SD7, SD14, SD15
Ref: Bon276, Buc148, LH134, RP163

Agrocybe paludosa (Lange) Kuhn. & Romagn.
With Gramineae in sandy soil?
Wet dune slack?
Ref: Buc142, LH152, RP170
(RW Only)

Agrocybe sphaeromorpha (Bull.: Fr.) Fayod
With Gramineae in sandy soil.
Semi-fixed dune & slack SD7, SD14
Ref: Bon262

Bolbitius tibubans (Bull.: Fr.) Fr.
With Gramineae in sandy soil.
Dune slack and pathsides SD15
Ref: BFF3 p33

Bolbitius vitellinus (Pers.: Fr.) Fr.
On dung or rotting Gramineae
Dune grassland & slack SD8, SD14, SD15
Ref: Bon260, Buc142, LH152, RP154

Calocybe carnea (Bull.: Fr.) Donk
With Gramineae and Musci in sandy soil.
Dune slack SD14, SD15, SD16
Ref: Bon166, Buc71, RP43

Clitocybe barbularum (Romagn.) Orton
With Gramineae in sandy soil.
Dune slack SD14, SD15
Ref: Bon128 (as *Omphalina*)

Clitocybe dealbata (Sow.: Fr.) Kummer
With Gramineae in sandy soil.
Dune slack & grassland SD15c, SD9
Ref: Bon136, Buc64, LH96, RP50

Conocybe dunensis Wallace ap. Orton
With Gramineae or *Ammophila* in sandy soil or
bare sand.
Semi-fixed dunes SD7
Ref: Buc143

Conocybe lactea (J. Lange) Métrod
With Gramineae in sandy soil.
Wet dune slack SD14, SD15
Ref: Buc144, LH152, RP154

Coprinus comatus (Müll.: Fr.) S.F. Gray
With *Salix repens* in sandy soil.
Dune slack SD14, SD15
Ref: Bon270, Buc151, LH136, RP176

Coprinus niveus (Pers.: Fr.) Fr.
On dung.
Semi-fixed dunes SD7
Ref: Bon272, Buc154, LH138, RP178

Crinipellis stipitarius (Fr.) Pat.
On dead Gramineae stems.
Dune slack & semi-fixed dunes SD14, SD7
Ref: Bon174, Buc86

Eccilia sericeonitida Orton
With Gramineae & Musci in sandy soil.
Dune slack SD14, SD15
Ref: Bon188 (as *Entoloma undatum*) Buc116
(Also RW)

Galerina heterocystis (Atk.) Smith & Sing.
With Gramineae & Musci in sandy soil.
Dune slack SD14
Ref: Moser423
(Also RW)

Galerina hypnorum (Schrank: Fr.) Kuhn
With Gramineae & Musci in sandy soil.
Dune slack SD14, SD15
Ref: Buc138, LH174

Galerina luteofulva Orton
With *Salix repens* & Gramineae in sandy soil.
Wet dune slack SD15b
Ref: Moser426

Hebeloma pusillum J. Lange
With *Salix* in sandy soil.
Dune slack and scrub SD14, SD15, W22
Ref: Bon228, Buc127, LH160, RP148

Hygrocybe acutoconica (Clem.) Sing.
With Gramineae & Musci in sandy soil.
Dune Slack SD14, SD15
Ref: Bon106, Buc93 (as *H. langei*) RP65 (as *H. langei*)

Hygrocybe aurantiolutescens Orton
With Gramineae & Musci in sandy soil.
Dune slack SD14, SD15
Ref: Bon106

Hygrocybe conica (Scop.: Fr.) Kummer
With Gramineae & Musci in sandy soil.
Dune slack SD14, SD15
Ref: Bon104, Buc93, LH78 (as *Hygrophorus conicus*), RP60
(Also RW)

Hygrocybe conicoides (Orton) Orton & Watling
With Gramineae & Musci in sandy soil & bare
sand.
Mobile dune & slack SD6e, SD14, SD15
Ref: Bon104, Buc93

Hygrocybe nigrescens (Qué.) Kühn.
With Gramineae & Musci in sandy soil.
Semi-fixed dune & slack SD7, SD14, SD15
Ref: Bon104, Buc93, LH78 (as *Hygrophorus*),
RP60

Hygrocybe nivea (Scop.) Murr.
With Gramineae & Musci in sandy soil.
Dune slack SD14, SD15
Ref: Bon102 (as *Cuphophyllus*), Buc91 (as
Camarophyllus) LH76 (as *Hygrophorus*), RP65

Hygrocybe psittacina (Sch.) Kummer
With Gramineae in sandy soil.
Dune grassland SD8
Ref: Bon112, Buc92, LH78 (as *Hygrophorus*
psittacinus) RP65
(Also RW)

Inocybe acuta Boud
With *Salix repens* in sandy soil?
Dune slack?
Ref: Buc125
(RW Only)

Inocybe devoniensis Orton
With *Ammophila*, Gramineae & *Salix repens* in
sandy soil or bare sand.
Mobile dunes & eroded banks of slacks SD6d/e,
SD7
Ref: Buc124

Inocybe dulcamara (Alb. & Schw.: Pers.) Kummer
With *Salix repens* in sandy soil.
Dune slack SD14, SD15a
Ref: Bon234, Buc121, LH156, RP150
(Also RW)

Inocybe dunensis Orton
With *Salix repens* in sandy soil.
Dune slack SD14, SD15
Ref: Moser333
(Also RW)

Inocybe fastigiata (Schaeff.: Fr.) Qué.
With *Salix repens* in sandy soil.
Dune slack SD14, SD15
Ref: Bon234, Buc121, LH156, RP150

Inocybe halophila Heim
Ref: Moser327
(RW Only)

Inocybe serotina Peck
With *Ammophila*, Gramineae & *Salix repens* in
sandy soil or bare sand.
Mobile dunes & eroded banks of slacks SD6d/e,
SD7
Ref: Moser 327

Lepiota laevigata (J. Lange) J. Lange
With Gramineae & Musci in sandy soil.
Semi-fixed dune & slack SD7, SD14
Ref: Bon284, RP27 (as *L. oreadiformis*)

Lepista nuda (Fr.) Orton
With Gramineae & Musci in sandy soil.
Dune slacks, grassland and plantation SD14c, SD8,
X3
Ref: Bon144, Buc65, LH90 (as *Tricholoma nudum*)
RP113

Lepista sordida (Fr.) Sing.
With Gramineae & Musci in sandy soil & bare sand
at base of *Ammophila*.
Mobile & semi-fixed dunes and slacks SD6e, SD7,
SD14
Ref: Bon144, Buc65, RP113

Leptonia caerulea? Orton
Ref: Orton290
(RW Only)

Leptonia corvina (Kuhn.) Orton
With Gramineae & Musci in sandy soil.
Dune slack SD15
Ref: Buc119
(Also RW provisionally)

Leptonia nigroviolacea? Orton
Ref: Orton296
(RW Only)

Leptonia pyrospila? (Romagn.) Orton
Ref: Buc118
(RW Only)

Leptonia sericella? (Fr.: Fr.) Barb.
Ref: Buc117, LH182 (as *Rhodophyllus sericellus*)
RP117
(RW Only)

Leptonia serrulata (Pers.: Fr.) Kummer
With Gramineae & Musci in sandy soil.
Dune slack SD14, SD15
Ref: Bon194 (as *Entoloma serrulatum*) Buc118,
RP117

- Leucoagaricus leucothites* (Vitt.) Wasser
With Gramineae & Musci in sandy soil.
Semi-fixed dune & slack SD7, SD14, SD15a
Ref: Bon288, Buc60 (as *Lepiota*), LH124 (as
Lepiota), RP25 (as *Lepiota*)
- Macrolepiota excoriata* (Fr.) Wasser
With Gramineae & Musci in sandy soil.
Semi-fixed dune & slack SD7, SD14
Ref: Bon290, Buc60 (as *Lepiota*), LH122 (as
Lepiota), RP27 (as *Lepiota*)
- Marasmius oreades* (Bolt.: Fr.) Fr.
With Gramineae & Musci in sandy soil.
Fixed, semi-fixed dune & slack SD8, SD7, SD14,
SD15a
Ref: Bon174, Buc79, LH114, RP66
(Also RW)
- Melanoleuca excissa* (Fr.) Sing.
With Gramineae & Musci in sandy soil.
Dune slack SD15c
Ref: Bon164, Buc74
- Mycena fibula* (Bull.: Fr.) Kuhn.
With Gramineae & Musci in sandy soil.
Dune slack SD14
Ref: Bon128 (as *Rickenella*), Buc86, LH98 (as
Omphalina), RP75
(Also RW)
- Mycena flavo-alba* (Fr.) Quéf.
With Gramineae & Musci in sandy soil.
Dune slack SD14
Ref: Bon182, Buc82, LH112, RP75
- Mycena pura* (Pers.: Fr.) Kummer
With Gramineae & Musci in sandy soil.
Semi-fixed dune & slack SD7, SD14, SD15a
Ref: Bon180, Buc83, LH112, RP72
- Nolanea papillata* Bres.
With Gramineae and Musci in sandy soil.
Dune slack SD14, SD15
Ref: Bon190 (as *Entoloma papillatum*), Buc119
- Nolanea sericea* (Bull.: Merat.) Orton
With Gramineae and Musci in sandy soil.
Dune slack SD14, SD15, SD16
Ref: Bon190 (as *Entoloma sericeum*) LH180 (as
Rhodophyllus sericeus)
(Also RW)
- Nolanea staurospora* Bres.
Ref: Bon264 (as *Entoloma conferendum*), Buc120,
LH180 (as *Rhodophyllus staurosporus*) RP118
(RW Only)
- Omphalina mutila* (Fr.) Orton
On Gramineae.
Semi-fixed dune & slack SD7, SD14
Ref: Moser111 (as *Clitocybe josserandii*)
- Omphalina pyxidata* (Bull.: Fr.) Quéf.
With Gramineae & Musci in sandy soil.
Semi-fixed dune & slack SD7, SD14
Ref: Bon128, Buc6, LH98
- Panaeolus acuminatus* (Schaeff.: Secr.) Quéf.
On dung and rich soil.
Semi-fixed dune & slack SD7, SD14
Ref: Bon264, Buc157
- Panaeolus ater* (J. Lange) Kuhn. & Romagn.
On dung & rich soil.
All dune sites
Ref: Bon264, Buc157, RP182
(Also RW)
- Panaeolus campanulatus* (Bull.) Quéf.
Ref: Bon264, Buc157, RP181
(RW Only)
- Panaeolus foenicicii* (Pers.: Fr.) Schroeter ap. Cohn
With Gramineae in rich soil.
Dune slack & grassland SD14, SD15, SD8, SD9
Ref: Bon264, Buc156 (as *Panaeolina*) LH144,
RP182 (as *Panaeolina*)
(Also RW)
- Panaeolus papilionaceus* (Bull.: Fr.) Quéf.
On dung.
Dune slack & grassland SD14, SD15, SD8, SD9
Ref: Buc156
- Panaeolus rickenii* Hora
On dung & rich soil.
Dune slack & grassland SD14, SD15, SD8, SD9
Ref: Bon264, Buc157, LH144, RP181
(Also RW)
- Panaeolus semiovatus* (Sow.: Fr.) Lund.
On dung.
All sites
Ref: Bon264, Buc157, LH144, RP180

Panaeolus sphinctrinus (Fr.). Quéf.

On dung.

All sites

Ref: Bon264, Buc157, RP182

Psathyrella ammophila (Dur. & Lév) Orton

With *Ammophila* in bare sand.

Mobile dunes SD6a/d/e

Ref: Bon266, Buc158

Psilocybe semilanceata (Fr.) Kummer

With Gramineae & Musci in sandy soil.

Dune slack SD15, SD16

Ref: Bon254, Buc150, LH148, RP173

Psilocybe graminicola (Orton) Orton

Ref: BFF5p.51

(RW Only)

Psilocybe subcoprophila (Britz.) Sac.

On dung.

Fixed dunes SD8

Ref BFF5p42

Rhodocybe popinalis (Fr.) Sing.

With lichen, Gramineae or Musci in bare sand.

Semi-fixed dunes SD7

Ref: Bon188, Buc87, RP114

Stropharia caerulea Kreisel

With Gramineae in sandy soil.

Dune grassland & slack SD9, SD14, SD15

Ref: Bon250

Stropharia semiglobata (Basch.: Fr.) Quel

On dung or in rich sandy soil.

All sites

Ref: Bon250, Buc151, LH144, RP171

Tricholoma cingulatum (Fr.) Jacobasch

With *Salix repens* in sandy soil.

Dune slack SD14, SD15

Ref: Bon154, Buc70, LH86, RP35

Russulales

Lactarius controversus (Pers.) Fr.

With *Salix repens* in sandy soil.

Dune slack SD15

Ref: Bon94, Buc97, RP77

Russula pascua (Møll. & J. Schaef.) Romagn.

Ref: Mosser440

(RW Only)

Boletales

Paxillus involutus (Fr.) Fr.

With *Salix repens* in sandy soil.

Dune slack SD14, SD15

Ref: Bon50, Buc145, LH184, RP142

Gasteromycetales

Bovista plumbea (Pers.) Pers.

With Gramineae in sandy soil.

Semi-fixed dune & slack SD7, SD14, SD15a

Ref: Bon304, Buc195, LH218, RP249

(Also RW)

Calvatia excipuliformis (Pers.) Perdek

With Gramineae, *Salix* & *Pinus* in sandy soil.

Dune scrub and plantation W1, X3

Ref: Bon304, Buc197, LH216 (as *Lycoperdon excipuliforme*), RP247

Cyathus olla (Batsch) Pers.

With lichens & Bryophyta in sandy soil.

Semi-fixed dune & slack SD7, SD14, SD15a

Ref: Bon300, Buc197, LH222, RP255

Lycoperdon lividum Pers.

With lichens & Bryophyta in sandy soil.

Semi-fixed dune & slack SD7, SD14, SD15a

Ref: Bon304, Buc195, RP249 (as *L. spadiceum*)

Lycoperdon molle (Pers.) Pers.

With lichens & Bryophyta in sandy soil.

Dune slack & plantation SD14, SD15, X3

Ref: Buc196, LH218

Vascellum pratense (Pers.) Kreisel

With Gramineae in sandy soil.

Semi-fixed dune & slack SD7, SD14, SD15a

Ref: Bon304, Buc196, LH218 (as *Lycoperdon depressum*), RP249

Uredinales

Melampsora epitea v. *epitea* (A. Blytt) Jorst.

On *Dactylorhiza incarnata*?

(RW Only)

ASCOMYCETES

Claviceps purpurea (Fr.) Tul.
On *Ammophila* & *Elymus*.
Mobile dunes SD4, SD6a/d
Ref: Bon336, Buc205, LH48, RP278

Geoglossum cookeianum Nannfeldt
With Gramineae & Musci in sandy soil.
Semi-fixed dunes & slacks SD7, SD15
Ref: Bon332, LH44, RP274

Peziza ammophila Dur. & Mont.
With *Ammophila* in bare sand.
Mobile dunes SD6e
Ref: Dennis12

Trichoglossum hirsutum (Pers.: Fr.) Boud.
With Gramineae & Musci in sandy soil.
Semi-fixed dunes & slacks SD7, SD15
Ref: Bon332, Buc209, LH44 (as *Geoglossum*),
RP274

Appendix 2. Gibraltar Point NNR, annotated list of species

Species	Habitat	Source of record	
		Source 1	Source 2
Agaricales			
<i>Agaricus arvensis</i>	Dune grassland	Res. list	This survey
<i>Agaricus campestris</i>	Grazed dune grassland	Res. list	This survey
<i>Agaricus devoniensis</i>	Bare sand, semi-fixed dunes		This survey
<i>Agaricus semotus</i>	In grass, semi-fixed dunes		This survey
<i>Agaricus sylvaticus</i>	Under <i>Pinus</i>	Res. list	
<i>Agrocybe cylindracea</i>	On old tree roots	Res. list	
<i>Agrocybe semiorbicularis</i>	Short roadside grass	Res. list	
<i>Agrocybe sphaleromorpha</i>	Wet dune slack		This survey
<i>Arrhenia spathulata</i>	In moss	Res. list	
<i>Bolbitius titubans</i>	Grazed dune grassland		This survey
<i>Bolbitius vitellinus</i>	On rotting grass, rich soil	Res. list	
<i>Calocybe carnea</i>	Grazed dune grassland		This survey
<i>Clitocybe angustissima</i>	Under bushes	Res. list	
<i>Clitocybe dealbata</i>	Grazed dune grassland	Res. list	This survey
<i>Clitocybe langei</i>	Under trees	Res. list	
<i>Clitocybe umbilicata</i>	Under mixed trees	Res. list	
<i>Conocybe dunensis</i>	In grass, semi-fixed dunes		This survey
<i>Conocybe tenera</i>	In short grass	Res. list	
<i>Coprinus comatus</i>	Dune grassland	Res. list	
<i>Coprinus lagopus</i>	In short grass	Res. list	This survey
<i>Coprinus micaceus</i>	On buried wood, dead roots	Res. list	
<i>Coprinus plicatilis</i>	On lawns	Res. list	This survey
<i>Coprinus radians</i>	On stumps, logs, branches	Res. list	
<i>Coprinus radiatus</i>	On dung	Res. list	
<i>Crinipellis stipitarius</i>	On grass leaves		This survey
<i>Eccilia sericeonitida</i>	In grass, dune slack		This survey
<i>Entoloma porphyrophaeum</i>	Under trees	Res. list	
<i>Galerina hypnorum</i>	In moss	Res. list	This survey
<i>Galerina luteofulva</i>	In short grass, dune slack		This survey
<i>Galerina vittaeformis</i>	In short grass, dune slack		This survey
<i>Gymnopilus junonius</i>	On <i>Pinus</i> stump		This survey
<i>Gymnopilus penetrans</i>	On dead <i>Pinus</i> branch		This survey
<i>Hebeloma crustuliniforme</i>	Under frondose trees	Res. list	
<i>Hygrocybe acutoconica</i>	In short grass, dune slack		This survey
<i>Hygrocybe conica</i>	In short grass	Res. list	This survey
<i>Hygrocybe conicoides</i>	In grass & moss, dune slacks		This survey
<i>Hygrocybe nigrescens</i>	In short grass	Res. list	
<i>Hygrocybe nivea</i>	In short grass, dune slack		This survey
<i>Hygrocybe psittacina</i>	In grass	Res. list	
<i>Hygrocybe punicea</i>	In grass	Res. list	
<i>Inocybe dulcamara</i>	In short grass, dune slack		This survey
<i>Inocybe dunensis</i>	With moss or in bare sand		This survey
<i>Laccaria amethystea</i>	Under <i>Quercus</i>	Res. list	
<i>Lepiota alba</i>	In grassland	Res. list	
<i>Lepiota laevigata</i>	In short grass, dune grassland		This survey
<i>Lepista nuda</i>	Under trees	Res. list	This survey
<i>Lepista saeva</i>	In open grassland	Res. list	
<i>Lepista sordida</i>	In short grass, dune slack		This survey
<i>Leptonia serrulata</i>	In short grass, dune slack		This survey
<i>Marasmius androsaceus</i>	On pine needles	Res. list	This survey

<i>Marasmius oreadus</i>	In rings in grassland	Res. list	This survey
<i>Melanoleuca brevipes</i>	In grass under trees	Res. list	
<i>Melanoleuca cinereifolia</i>	Bare sand, mobile dunes		This survey
<i>Melanoleuca melaleuca</i>	In pasture land or under trees	Res. list	
<i>Mycena flavo-alba</i>	In short grass, dune slack		This survey
<i>Mycena galericulata</i>	On stumps	Res. list	
<i>Mycena inclinata</i>	on <i>Fagus</i> stumps	Res. list	
<i>Mycena leptocephala</i>	In short grass	Res. list	This survey
<i>Mycena pura</i>	Under broadleaved trees	Res. list	This survey
<i>Mycena vitilis</i>	On dead leaves	Res. list	
<i>Mycenella margaritiformis</i>	In short grass, dune slacks		This survey
<i>Nolanea sericea</i>	In short grass	Res. list	This survey
<i>Omphalina ericetorum</i>	On peaty ground	Res. list	
<i>Omphalina mutila</i>	On grass stems		This survey
<i>Omphalina pyxidata</i>	In short grass	Res. list	This survey
<i>Omphalina rustica</i>	Sandy heath, dunes	Res. list	
<i>Ossicaulis lignatilis</i>	On dead deciduous wood	Res. list	
<i>Panaeolus ater</i>	On rich ground in grass		This survey
<i>Panaeolus fimicola</i>	On dung	Res. list	
<i>Panaeolus foeniculii</i>	In short grass	Res. list	This survey
<i>Panaeolus papilionaceus</i>	On rich ground in grass		This survey
<i>Panaeolus rickenii</i>	On rich ground in grass		This survey
<i>Panaeolus semiovatus</i>	On dung	Res. list	This survey
<i>Panaeolus sphinctrinus</i>	On dung	Res. list	This survey
<i>Pholiota squarrosa</i>	Clustered on base of <i>Pinus</i>	Res. list	This survey
<i>Psathyrella ammophila</i>	Bare sand, mobile dunes	Res. list	This survey
<i>Psathyrella candolleana</i>	In short grass	Res. list	This survey
<i>Psilocybe semilanceata</i>	On rich ground in grass		This survey
<i>Psilocybe subcoprophila</i>	On dung		This survey
<i>Resupinatus applicatus</i>	On underside of dead branches	Res. list	
<i>Rhodocybe popinalis</i>	With moss, semi-fixed dunes		This survey
<i>Stropharia aeruginosa</i>	In grass in woodland	Res. list	
<i>Stropharia caerulea</i>	In short grass, dune slacks		This survey
<i>Stropharia coronilla</i>	In short grass, woodland & slack	Res. list	This survey
<i>Stropharia inuncta</i>	In short grass, dune slacks		This survey
<i>Stropharia semiglobata</i>	On dung	Res. list	This survey
<i>Tricholoma cingulatum</i>	With <i>Salix repens</i> in slacks		This survey
<i>Tubaria hiemale</i>	On buried debris & sticks		This survey
<i>Volvariella speciosa</i>	On rich soil & bare sand	Res. list	This survey
Boletales			
<i>Paxillus involutus</i>	With <i>Betula</i> & <i>Salix repens</i>	Res. list	This survey
Gasteromycetes			
<i>Bovista aestivalis</i>	Dune slacks	Res. list	
<i>Bovista nigrescens</i>	On peaty grassland		This survey
<i>Bovista plumbea</i>	In short grass	Res. list	This survey
<i>Calvatia excipuliformis</i>	Dune grassland	Res. list	This survey
<i>Cyathus olla</i>	In grass on buried debris	Res. list	This survey
<i>Geastrum coronatum</i>	On old dunes	Res. list	
<i>Geastrum nanum</i>	In short grass, old slacks	Res. list	This survey
<i>Geastrum triplex</i>	On needle debris, under <i>Pinus</i>	Res. list	This survey
<i>Geastrum vulgatum</i>	On old dunes	Res. list	
<i>Lycoperdon lividum</i>	In grass, semi-fixed dunes		This survey
<i>Lycoperdon molle</i>	On needle debris under <i>Pinus</i>		This survey

<i>Lycoperdon perlatum</i>	In grass under trees	Res. list	This survey
<i>Lycoperdon pyriforme</i>	On dead stumps	Res. list	This survey
<i>Phallus hadriani</i>	In bare sand, mobile dunes	Res. list	
<i>Phallus impudicus</i>	On rich soil & bare sand	Res. list	This survey
<i>Vascellum pratense</i>	In grass & moss, old dunes	Res. list	This survey
Aphylophorales			
<i>Auriscalpium vulgare</i>	On buried pine cones	Res. list	
<i>Coniophora puteana</i>	On dead stumps	Res. list	
<i>Coriolus versicolor</i>	On dead wood	Res. list	
<i>Phellinus hippophaëcola</i>	On <i>Hippophaë rhamnoides</i>	Res. list	This survey
<i>Thelephora terrestris</i>	in <i>Pinus</i> needles		This survey
Tremellales			
<i>Hirneola auricula-judae</i>	On dead <i>Sambucus</i>	Res. list	This survey
Dacrymycetales			
<i>Dacrymyces stillatus</i>	On dead wood	Res. list	
Uredinales			
<i>Puccinia caricina</i>	On <i>Carex</i>	Res. list	
<i>Puccinea cnici-oleracei</i>	On <i>Aster trifolium</i>	Res. list	
<i>Puccinia dioicae (a)</i>	Aecid. <i>Senecio jacobaea</i>	Res. list	
<i>Puccinia dioicae (u)</i>	Uredo. on <i>Carex arenaria</i>	Res. list	
<i>Puccinia punctiformis</i>	On <i>Cirsium arvense</i>	res. list	
<i>Puccinia recondita</i>	On <i>Cynoglossum officinale</i>	Res. list	
Ascomycetes			
<i>Claviceps purpurea</i>	On <i>Ammophila, Elymus</i> , etc.	Res. list	This survey
<i>Daldinia concentrica</i>	On dead stumps and branches	Res. list	
<i>Nectria cinnabarina</i>	On bark of dead twigs	Res. list	
<i>Peziza ammophila</i>	Bare sand, mobile dunes	Res. list	This survey
<i>Rhytisma acerina</i>	On <i>Acer pseudoplatanus</i> leaves	Res. list	
<i>Xylaria hypoxylon</i>	On dead wood	Res. list	This survey
<i>Xylaria polymorpha</i>	On dead wood	Res. list	This survey
Myxomycetes			
<i>Didymium eximium</i>	Isolated from rabbit dung	Res. list	
<i>Licea testudinacea</i>	Isolated from dead bark	Res. list	
<i>Mucilago crustacea</i>	On living grass leaves	Res. list	This survey
<i>Perichaena depressa</i>	On dead bark	Res. list	

Appendix 3 Saltfleetby to Theddlethorpe Dunes NNR, annotated list of species

Species	Habitat
Agaricales	
<i>Agaricus bisporus</i>	On rotting vegetation
<i>Agaricus devoniensis</i>	Bare sand, semi-fixed dunes
<i>Agaricus macrosporus</i>	Dune grassland
<i>Agrocybe eredia</i>	Dune grassland
<i>Agrocybe semiorbicularis</i>	Dune slack
<i>Bolbitius titubans</i>	In short grass, dune slack
<i>Calocybe carnea</i>	Dune slack
<i>Clitocybe dealbata</i>	Dune slack
<i>Conocybe dunensis</i>	Dune slack & semi-fixed dunes
<i>Coprinus atramentarius</i>	On buried wood
<i>Galerina hypnorum</i>	In moss, dune slack
<i>Hygrocybe conicoides</i>	In short grass, semi-fixed dunes
<i>Hygrocybe nivea</i>	Dune slack
<i>Inocybe serotina</i>	In bare sand, semi-fixed dunes
<i>Lepiota laevigata</i>	Dune grassland
<i>Leucoagaricus leucothites</i>	Dune grassland
<i>Marasmius oreades</i>	Dune slack
<i>Melanoleuca excissa</i>	Dune grassland
<i>Mycena oortiana</i>	On buried wood
<i>Nolanea staurospora</i>	Dune grassland
<i>Omphalina pyxidata</i>	Dune slack
<i>Panaeolus foenisecii</i>	On rich soil, in grass
<i>Panaeolus semiovatus</i>	On dung
<i>Panaeolus sphinctrinus</i>	On dung
<i>Psathyrella ammophila</i>	Bare sand, mobile dunes
<i>Psilocybe muscorum</i>	On rich soil in grass
<i>Rhodocybe popinalis</i>	In moss, semi-fixed dune
<i>Stropharia caerulea</i>	Dune grassland
<i>Tubaria hiemale</i>	On buried debris & sticks
Russulales	
<i>Lactarius pubescens</i>	With birch, dune scrub
Gasteromycetes	
<i>Bovista plumbea</i>	Dune slack & grassland
<i>Lycoperdon lividum</i>	Dune slack
<i>Vascellum pratense</i>	In grass, semi-fixed dunes
Tremellales	
<i>Hirneola auricula-judae</i>	On <i>Sambucus</i>
Aphylophorales	
<i>Phellinus hippophaëcola</i>	On <i>Hippophaë rhamnoides</i>
Ascomycetes	
<i>Peziza ammophila</i>	Bare sand, mobile dunes

Appendix 4 Braunton Burrows NNR, annotated list of species

Species	Habitat	Source of records	
		Source 1	Source 2
Agaricales			
<i>Agaricus arvensis</i>	Dune grassland		This survey
<i>Agaricus campestris</i>	Grazed dune grassland	Res. list	
<i>Agaricus devoniensis</i>	Bare sand, semi-fixed dunes	Res. list	This survey
<i>Agaricus semotus</i>	In grass, semi-fixed dunes		This survey
<i>Agrocybe dura</i>	Grazed dune grassland	Res. list	
<i>Agrocybe paludosa</i>	Wet dune slack	Res. list	
<i>Agrocybe pusiola</i>	With <i>Salix atrocinerea</i>	Res. list	
<i>Agrocybe semiorbicularis</i>	Fixed & semi-fixed dunes	Res. list	
<i>Alboleptonia sericella</i>	In moss, dune slacks		This survey
<i>Armillaria mellea</i>	On dead <i>Ulmus</i>	Res. list	
<i>Arrhenia spathulata</i>	In moss, semi-fixed dunes	Res. list	
<i>Bolbitius titubans</i>	Grazed dune grassland		This survey
<i>Bolbitius vitellinus</i>	On rotting grass, rich soil		This survey
<i>Calocybe carnea</i>	Grazed dune grassland		This survey
<i>Calocybe obscurissima</i>	In grass, semi-fixed dunes		This survey
<i>Cantharellula obbata</i>	In moss, fixed dunes	Res. list	
<i>Clitocybe barbularum</i>	In moss, semi-fixed dunes	Res. list	
<i>Clitocybe dealbata</i>	Grazed due grassland	Res. list	This survey
<i>Collybia dryophila</i>	Pathside		This survey
<i>Conocybe dunensis</i>	In grass, semi-fixed dunes		This survey
<i>Conocybe lactea</i>	In grass, fixed dunes	Res. list	This survey
<i>Conocybe siliginea</i>	In moss	Res. list	
<i>Conocybe tenera</i>	In short grass	Res. list	
<i>Coprinus atramentarius</i>	On buried wood	Res. list	
<i>Coprinus cinereus</i>	On dung & rotting grass	Res. list	
<i>Coprinus comatus</i>	Dune grassland	Res. list	
<i>Coprinus lagopus</i>	In short grass	Res. list	
<i>Coprinus micaceus</i>	On burried wood, dead roots	Res. list	
<i>Coprinus plicatilis</i>	On lawns	Res. list	This survey
<i>Coprinus sterquilinus</i>	Semi-fixed dunes	Res. list	
<i>Crinipellis stipitarius</i>	On grass leaves	Res. list	This survey
<i>Eccilia sericeonitida</i>	In grass, dune slacks	Res. list	
<i>Galerina embolus</i>	With <i>Salix atrocinerea</i>	Res. list	
<i>Galerina hypnorum</i>	In moss		This survey
<i>Galerina laevis</i>	With moss, dune slacks	Res. list	
<i>Galerina luteofulva</i>	In short grass, dune slacks		This survey
<i>Galerina pseudopumila</i>	Dune slacks	Res. list	
<i>Hebeloma hiemale</i>	With <i>Salix repens</i>	Res. list	
<i>Hebeloma longicaudum</i>	With <i>Salix repens</i>	Res. list	
<i>Hebeloma mesophaeum</i>	With <i>Salix atrocinerea</i>	Res. list	
<i>Hebeloma pusillum</i>	With <i>Salix repens</i> , dune slacks		This survey
<i>Hygrocybe acutoconica</i>	In short grass, dune slacks	Res. list	
<i>Hygrocybe aurantiolutescens</i>	In short grass, dune slacks		This survey
<i>Hygrocybe coccinea</i>	In grass, dune slacks	Res. list	
<i>Hygrocybe conica</i>	In short grass		This survey
<i>Hygrocybe conicoides</i>	In grass & moss, dune slacks		This survey
<i>Hygrocybe nigrescens</i>	In short grass, dune slacks	Res. list	
<i>Hygrocybe nivea</i>	In short grass, dune slacks	Res. list	This survey
<i>Hygrocybe punicea</i>	In grass	Res. list	
<i>Hygrocybe puniceus</i>	In grass	Res. list	

<i>Hypholoma elongatum</i>	Wet dune slack	Res. list	
<i>Inocybe aghardii</i>	With <i>Salix repens</i> , dune slacks	Res. list	
<i>Inocybe albodisca</i>	Dune slacks	Res. list	
<i>Inocybe brunnea</i>	With <i>Salix repens</i> , dune slacks	Res. list	
<i>Inocybe devoniensis</i>	Semi-fixed dunes	Res. list	
<i>Inocybe dulcamara</i>	With <i>Salix repens</i> , dune slacks	Res. list	This survey
<i>Inocybe dunensis</i>	With <i>Salix repens</i> , dune slacks	Res. list	
<i>Inocybe fastigiata</i>	With <i>Salix repens</i> , dune slacks	Res. list	
<i>Inocybe serotina</i>	In moss, semi-fixed dunes		This survey
<i>Lepiota cristata</i>	In moss & grass, mid-dunes	Res. list	This survey
<i>Lepiota fulvella</i>	With <i>Salix atrocinnerea</i>	Res. list	
<i>Lepiota laevigata</i>	In short grass, dune grassland		This survey
<i>Lepiota sistriata</i>	With <i>Salix atrocinnerea</i>	Res. list	
<i>Lepista nuda</i>	Dune grassland	Res. list	
<i>Lepista sordida</i>	In short grass, dune slack		This survey
<i>Leptonia griseorubella</i>	Dune slacks	Res. list	
<i>Leptonia serrulata</i>	In short grass, dune slack		This survey
<i>Marasmius litoralis</i>	On buried grass stems, mobile dunes	Res. list	
<i>Marasmius oreades</i>	In rings in grassland		This survey
<i>Marasmius ramealis</i>	On dead rubus stem	Res. list	
<i>Melanoleuca melaleuca</i>	In pasture land or under trees	Res. list	
<i>Melanoleuca strictipes?</i>	Bare sand	Res. list	
<i>Mycena chlorantha</i>	In grass & moss	Res. list	
<i>Mycena flavo-alba</i>	In short grass, dune slack		This survey
<i>Mycena gracilis</i>	On debris under <i>Salix atrocinnerea</i>	Res. list	
<i>Mycena pura</i>	Grazed dune grassland		This survey
<i>Mycena speirea</i>	On debris under <i>Salix atrocinnerea</i>	Res. list	
<i>Naucoria scolecina</i>	Dune slacks	Res. list	
<i>Nolanea sericea</i>	In short grass, dune slacks	Res. list	
<i>Omphalina obscurata</i>	In slacks & semi-fixed dunes	Res. list	
<i>Omphalina pyxidata</i>	In short grass	Res. list	
<i>Omphalina rustica</i>	Sandy heath, dunes	Res. list	
<i>Ossicaulis lignatilis</i>	On dead deciduous wood	Res. list	
<i>Panaeolus acuminatus</i>	On rich ground in grass	Res. list	
<i>Panaeolus foeniseccii</i>	In short grass		This survey
<i>Panaeolus reickenii</i>	On rich ground in grass	Res. list	
<i>Panaeolus semiovatus</i>	On dung		This survey
<i>Panaeolus sphinctrinus</i>	On dung		This survey
<i>Pleurotus cornucopiae</i>	On dead <i>Ulmus</i> trunk	Res. list	
<i>Pluteus cervinus</i>	On dead wood		This survey
<i>Pluteus cinereofuscus</i>	On dead <i>Ulmus</i> trunk	Res. list	
<i>Psathyrella ammophila</i>	Bare sand, mobile dunes	Res. list	
<i>Psathyrella atomata</i>	With <i>Salix repens</i>	Res. list	
<i>Psathyrella candolleana</i>	With <i>Salix atrocinnerea</i>	Res. list	
<i>Psathyrella conopilea</i>	In grass	Res. list	
<i>Psathyrella gracilis</i>	In grass	Res. list	
<i>Psathyrella marcescibilis</i>	In grass	Res. list	
<i>Psathyrella obtusata</i>	In grass	Res. list	
<i>Psilocybe coprophila</i>	On dung	Res. list	
<i>Psilocybe inquilina</i>	On dead <i>Ammophila</i> & dung	Res. list	
<i>Psilocybe semilanceata</i>	On rich ground in grass		This survey
<i>Psilocybe subcoprophila</i>	On dung		This survey
<i>Rhodocybe popinalis</i>	With moss, semi-fixed dunes	Res. list	This survey
<i>Stropharia aeruginosa</i>	In grass in woodland	Res. list	
<i>Stropharia caerulea</i>	In short grass, dune slacks		This survey

<i>Stropharia coronilla</i>	In short grass, woodland & slacks	Res. list	
<i>Stropharia inuncta</i>	In short grass, dune slacks	Res. list	This survey
<i>Stropharia semiglobata</i>	On dung	Res. list	
<i>Tricholoma cingulatum</i>	With <i>Salix repens</i> in dune slacks		This survey
<i>Volvariella speciosa</i>	On rich soil & bare sand	Res. list	
Gasteromycetes			
<i>Bovisteia plumbea</i>	In short grass	Res. list	This survey
<i>Cyathus olla</i>	In grass on buried debris	Res. list	
<i>Lycoperdon lividum</i>	In grass & moss, semi-fixed dunes	Res. list	This survey
<i>Phallus hadriani</i>	In bare sand, mobile dunes	Res. list	
<i>Tulostoma brumale</i>	In short grass	Res. list	
<i>Vascellum pratense</i>	In grass & moss, old dunes		This survey
Aphylophales			
<i>Clavaria tenuipes</i>	With <i>Salix</i>	Res. list	
<i>Coriolus versicolor</i>	On dead wood	Res. list	
<i>Polyporus nummularius</i>	With <i>Salix repens</i>	Res. list	
Tremellales			
<i>Hirneola auricula-judae</i>	On dead <i>Sambucus</i>	Res. list	This survey
<i>Tremella mesenterica</i>	On dead wood	Res. list	
Uredinales			
<i>Melampsora epitea</i>	On <i>Dactylorhiza</i> , <i>Euonymus</i> & <i>Salix</i>	Res. list	
<i>Puccinia dioicae</i>	Aecid. on <i>Senecio jacobaea</i>	Res. list	
<i>Puccinia dioicae</i> v <i>schoelenaria</i>		Res. list	
<i>Puccinia hieracii</i>	On <i>Taraxacum</i> spp.	Res. list	
<i>Puccinia pulverulenta</i>	On <i>Epilobium hirsutum</i>	Res. list	
<i>Triphragmium ulmariae</i>	On <i>Filipendula ulmaria</i>	Res. list	
<i>Claviceps purpurea</i>	On <i>Ammophila</i>		This survey
<i>Cordiceps militaris</i>	Parasitic on insects	Res. list	
Ascomycetes			
<i>Geoglossum cookianum</i>	In grass, dune slacks	Res. list	
<i>Glioniopsis levantica</i>		Res. list	
<i>Leptopodia pezizoides</i>	With <i>Salix repens</i>	Res. list	
<i>Morchella esculenta</i>	Semi-fixed dunes	Res. list	
<i>Peziza ammophila</i>	Bare sand, mobile dunes	Res. list	
<i>Peziza vesiculosa</i>	Fixed dunes	Res. list	
<i>Pezizella vulgaris</i>		Res. list	
<i>Pyrenopeziza fuckelii</i>		Res. list	
<i>Pyrenopeziza lychnidis</i>		Res. list	
<i>Scutellinia trechispora</i>	On damp sand	Res. list	
<i>Sepultaria arenicola</i>	Bare sand, dune slacks	Res. list	
<i>Trichoglossum hirsutum</i>	In grass, dune slacks	Res. list	

Appendix 5 Synonymy

Current name	Synonyms
<i>Arrhenia spathulata</i>	<i>Leptoglossum muscigenum</i>
<i>Coprinus cinereus</i>	<i>Coprinus delicatulus</i>
<i>Lepiota laevigata</i>	<i>Lepiota oreadiformis</i>
<i>Leucoagaricus leucothites</i>	<i>Lepiota naucina</i>
<i>Ossicaulis lignatilis</i>	<i>Pleurotus lignatilis</i>
<i>Stropharia caerulea</i>	<i>Stropharia cyanea</i>

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