

Dataset Documentation

Woodlands Survey of Great Britain 1971 - 2001

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Dataset Name: Woodlands Survey of Great Britain 1971 -2001

Dataset Description: In 1971, 103 broadleaved woodlands were surveyed across Britain. Ecological information was recorded at the site level and in more detail from 16 200m² sample plots located at random within each site. Data was collected on plant species composition in the canopy and ground flora, soil pH and Soil Organic Matter, habitat management and a wide range of other plot and site-level descriptors. All sites and, where possible, sample plots were revisited and recorded again over the growing seasons of 2000, 2002 and 2003 (referred to as '2001 survey'), using exactly the same field methods.

Geographic Coverage: 103 woodland sites in Great Britain

Time Period: 1971 and 2000-3 (as '2001')

Data Categories:

Vegetation Data (<i>Woodlands_Survey_Flora_Data_1971_2001</i>):	Vascular plants. Bryophytes. Lichens.
Soil Data (<i>Woodlands_Survey_Soil_Data_1971_2001</i>):	pH and Loss on ignition (Soil organic matter), soil group
Tree diameter (<i>Woodlands_Survey_Tree_Diameter_Data_1971_2001</i>):	Trees - diameter at breast height (DBH)
Site information (<i>Woodlands_Survey_Site_Information_1971_2001</i>):	Slope. Aspect. Locations. Descriptions. Habitat categories.

Survey Design & Methods: Stratified sampling across entire area. Surveyed according to Bunce & Shaw's 1973 standardized survey methods. Field handbook included in supporting documentation.

Related Datasets:

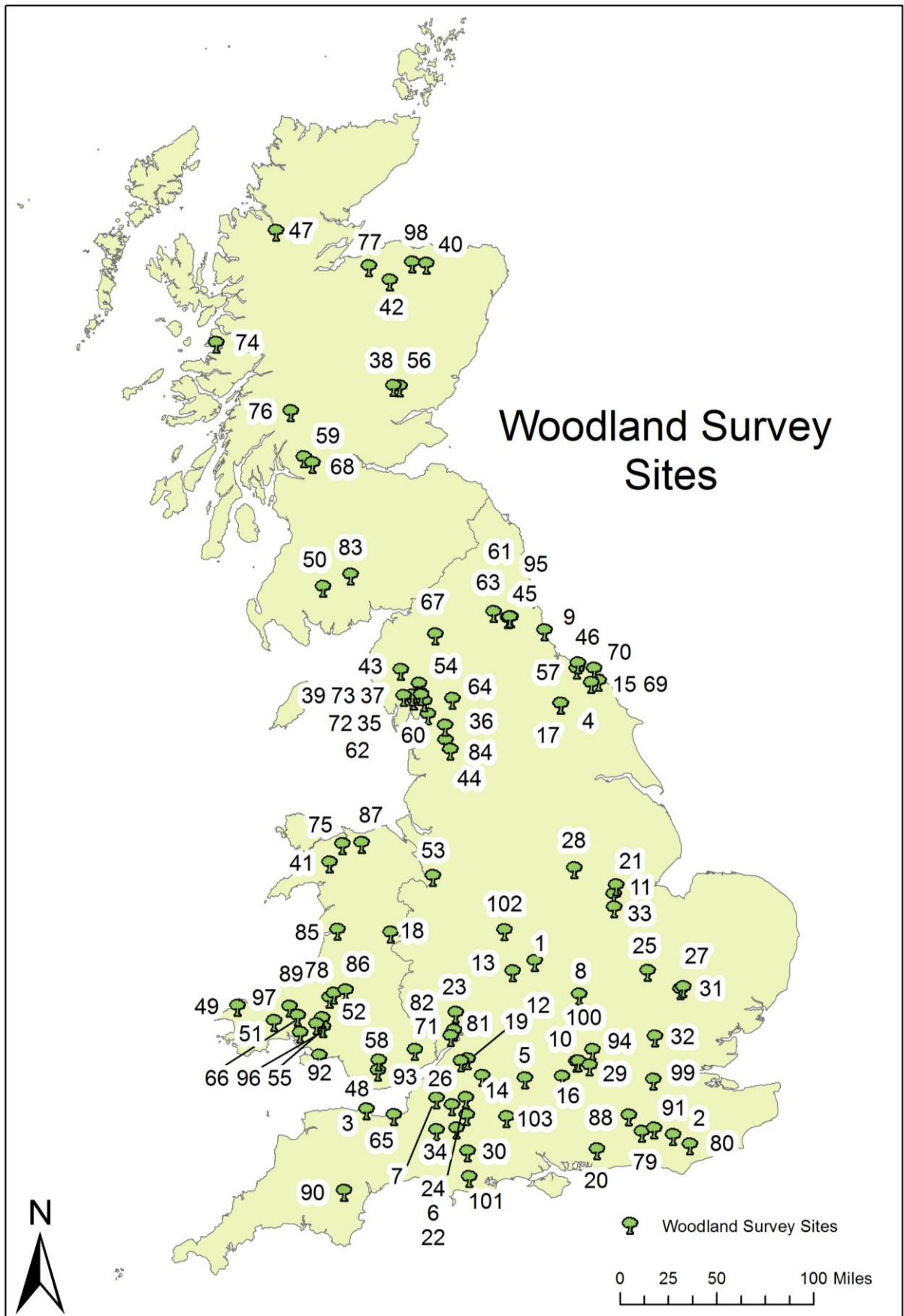
- Countryside Survey <http://www.countrysidesurvey.org.uk/>
- Steele, R.C. (1968). National survey of woodlands. Lincoln. Reprinted from *Society for the Promotion of Nature Reserves Handbook*.

Originator Details (at time of surveys):

1971:
- R.G.H. Bunce & M.W. Shaw, Woodland Ecology Section, Nature Conservancy - Merlewood, Grange-over-Sands.

2001-3:
- Simon Smart, Helaina Black. CEH Lancaster, Library Avenue, Bailrigg, LANCASTER
- Keith Kirby, English Nature, Northminster House, PETERBOROUGH
- Phil Corney, Applied Vegetation Dynamics Laboratory, School of Biological Sciences, University of Liverpool, LIVERPOOL

Geographical Coverage



Site List

Site Code	Site	Site Code	Site
1	Waverley Wood	53	Bubney wood
2	Pickreed Wood	54	Newclose Wood
3	Greenaleigh Plantation	55	Carmel Wood
4	Reins Wood	56	Den of Alyth Wood
5	Love's Copse	57	Pinkney Bank Wood
6	Longleat Woods	58	Coed Gelli-draws
7	Compton Wood	59	Gartfairn Wood
8	Say's Copse & Smalladine Copse	60	Eaves Wood
9	Hawthorn Dene	61	Longclose Wood
10	Kitesgrove, Juniperhall and Home woods; Big Ashes and Stock	62	Winster Wood
11	Old Park Wood	63	Riding Mill Wood
12	Midger Wood & Back Common	64	Rottenbutts Wood
13	Austy Wood	65	Great Plantation
14	Birds Marsh	66	Glan Morlies
15	Beck Hole Scar	67	Eden Gorge Wood
16	Ashampstead Common	68	Blane Wood
17	Ashberry Wood	69	Newton House Wood
18	Fridd Wood	70	Over Dale Wood
19	Lower Wetmoor	71	Morse's Grove
20	Wellhanger Copse	72	Hall Brow
21	Sapperton South Wood & Pickworth Wood	73	Great Knott
22	Park Wood	74	Glen Beasedale Wood
23	Betty Daw's Wood	75	Ceunant Dulyn
24	Hill wood	76	Coille Coire Chuilc
25	Papworth Wood	77	Dounduff Wood
26	Loocombe Wood	78	Allt-yr-Hebog
27	Rivey Wood	79	Warren Wood
28	Spital	80	Hoad's Wood
29	Medmenham wood	81	Wern-fawr Wood
30	Piddles Wood	82	Blakeneyhill Wood
31	Balsham	83	Tynron
32	Hoddesdonpark Wood	84	Wellington Wood
33	Docksight Wood	85	Allt-ddu and Dol-y-garnedd wood
34	Luns Hill Wood	86	Dinas Wood
35	Whitbarrow Wood	87	Coedcochion Wood
36	Pike Gill Wood	88	Leith Hill Place Wood; Farmhouse, Slittens & Hooks Copses
37	Birks Brow	89	Allt Blairn Eigian
38	Craighall Gorge	90	Houndtor Wood
39	Haverigg Holme	91	Chiddingly Wood
40	Mill wood	92	Gelli-hir Wood
41	Coed Y Wenault	93	Llangibby Park Wood
42	Callender	94	Bradenham Wood; The Coppice
43	Seatoller Wood	95	Priestfield
44	New Laund and High Wood	96	Garreg-goch-isaf wood
45	Sliding Braes	97	Afon Sylgen wood
46	White Cliff Wood	98	Glen Orchil Wood
47	Corrieshalloch Gorge	99	Dulwich wood
48	Hensol Wood	100	Nettlebedcommon Wood
49	Pen-yr-alt Wood	101	Oakers
50	Garroch Wood	102	Lower Nut Hurst wood
51	Cil-Hen-Ros	103	Normanton Down gorse
52	Allt Penarth Wood		

1. Introduction to the database

Background

In 1971, 103 broadleaved woodlands were surveyed across Britain. Ecological information was recorded at the site level and in more detail from 16 200m² sample plots located at random within each site. Data was collected on plant species composition in the canopy and ground flora, soil pH and Soil Organic Matter, habitat management and a wide range of other plot and site-level descriptors. All sites and, where possible, sample plots were revisited and recorded again over the growing seasons of 2000, 2002 and 2003 (referred to as '2001'), using exactly the same field methods.

Analyses were carried out to determine the kinds of ecological change that had occurred in the interval while a series of explanatory variables were assembled from the survey data and external sources in order to estimate the principal drivers of change. These included atmospheric deposition of S and N, climate, change in canopy structure and woodland management. The results have been published in Kirkby et al. (2005) and Corney et al. (2004), the latter publication focussing on an assessment of spatial factors controlling woodland composition and structure in the baseline year of 1971. Users of the database should consult these publications for further information on field methods and analytical results.

2. Dataset Descriptions

Woodlands Survey Site Information 1971 2001

Description: Site Information, plot locations and information, slope and aspect

Format: Comma separated values

Field name	Format	Description
Site	Numeric	Site code - number between 1 and 103
Site_name	Text	Name of wood (where Field_sheet = 'Site header' only)
Plot	Numeric	Plot number between 1 and 16 (where Field_sheet = 'Plot descriptions' or 'Plot header' only)
Code	Numeric	Code for site description information (where Field_sheet = 'Site descriptions' or 'Plot descriptions' only)
Description	Text	Description of site description information (where Field_sheet = 'Site descriptions' or 'Plot description' only). See handbooks for further information.
Notes	Text	Additional notes regarding site or plot (where Field_sheet = 'Site descriptions' or 'Plot descriptions' only)
Code_group	Text	Category of site description code (where Field_sheet = 'Site descriptions' only). Groups of site level descriptors were identified to allow construction of indices measuring the extent and change of woodland management (wm), tree and shrub regeneration (r), open habitats (o) and adjacent land cover (l)
Code_group_dsc	Text	Category of site description code (where Field_sheet = 'Site descriptions' only). Description of code (in Code_group).
Score	Numeric	For open habitat features a weighting of 1 or 5 was given to each code to reflect the size of the open habitat. For example, a path 1-5m wide was given a score of 1 whilst a ride >5m would earn a 5. Hence, the final index of abundance of open habitats was weighted by the degree of openness suggested by the different site level descriptors. See Kirkby <i>et al.</i> (2005) for further details. (Where

		Field_sheet = 'Site descriptions' only).
Year	Numeric	Year of survey for site descriptions (where Code_type = 'Site descriptions' or 'Plot descriptions' only)
Field_sheet	Text	Sheet on which original data was recorded. Grouping of code types (Site Header, Site Description, Plot Header, Plot descriptions)
Slope71	Numeric	Slope in degrees 1971 (where Field_sheet = 'Plot header' only)
Slope03	Numeric	Slope in degrees 2003 (where Field_sheet = 'Plot header' only)
Aspect71	Numeric	Aspect in degrees 1971 (where Field_sheet = 'Plot header' only)
Aspect03	Numeric	Aspect in degrees 2003 (where Field_sheet = 'Plot header' only)
Reason_for_nosurvey	Text	Explanation for a plot not being resurveyed in 2000s (where Field_sheet = 'Plot descriptions' only)
Country	Text	Country where site is located (England Scotland ,Wales) (where Field_sheet = 'Site header' only)
Easting	Numeric	Easting of site (OSGB 1936, GB National Grid) in kilometres (where Field_sheet = 'Site header' only)
Northing	Numeric	Northing of site (OSGB 1936, GB National Grid) in kilometres (where Field_sheet = 'Site header' only)
Recorders1971	Text	Initials of site surveyors in 1971 (where Field_sheet = 'Site header' only)
Recorders2003	Text	Initials of site surveyors in 2000s (where Field_sheet = 'Site header' only)
Date2003	Date	Date site surveyed in 2000s (start) (where Field_sheet = 'Site header' only)
Date1971	Date	Date site surveyed in 1971 (start) (where Field_sheet = 'Site header' only)
Site_usage	Text	Usage of site e.g. managed/ unmanaged (where Field_sheet = 'Site header' only)

Woodlands Survey Tree Diameter Data 1971 2001

Description: Plot Diameter at Breast height (DBH) data

Format: Comma separated values

Field name	Format	Description
Site	Numeric	Site code - number between 1 and 103
Plot	Numeric	Plot number between 1 and 16
BRC_number	Numeric	Code number of species (according to Biological Record Centre species list)
BRC_names	Text	Scientific name of species (according to Biological Record Centre species list)
Amalgams	Numeric	BRC number but where inconsistently recorded, tree species are grouped into a generic or cross-specific taxon e.g. <i>Quercus</i> spp. and <i>Betula pendula/pubescens</i>
Amalgam_names	Text	Scientific name of species (according to Biological Record Centre species list) number but where inconsistently recorded tree species are grouped into a generic or cross-specific taxon eg. <i>Quercus</i> spp. and <i>Betula pendula/pubescens</i>
Status	Numeric	Equal to 'Live' if tree was alive, 'Dead' if tree was dead
DBHclass	Numeric	Code indicating the 5cm interval band within which the measured Diameter at Breast Height of each individual of each tree, shrub or sapling fell. 1-32 (see below).
Count	Numeric	Count of individuals of each species in the respective DBH class. Note that saplings and shrubs were multiplied by two because these categories were only counted in two quarters of each sampling plot in both surveys.
Final_count	Numeric	Count of individuals in the DBH class in each plot. Note that saplings and shrubs were multiplied by two because these categories were only counted in two quarters of each sampling plot in both surveys
Yr	Numeric	Yr 1 = 1971, Yr 2 = 2000s
Woody	Text	'w' if woody species
Field_sheet	Text	Sheet on which original data was recorded ("Tree sapling shrub" - Tree sapling and shrub data)

DBH Class	DBH Range (cm)	DBH Class	DBH Range (cm)	DBH Class	DBH Range (cm)	DBH Class	DBH Range (cm)
1	0-5	9	41-45	17	81-85	25	121-125
2	6-10	10	46-50	18	86-90	26	126-130
3	11-15	11	51-55	19	91-95	27	131-135
4	16-20	12	56-60	20	96-100	28	136-140
5	21-25	13	61-65	21	101-105	29	141-145
6	26-30	14	66-70	22	106-110	30	146-150
7	31-35	15	71-75	23	111-115	31	151-155
8	36-40	16	76-80	24	116-120	32	156-160

Woodlands Survey Flora 1971 2001

Description: Plot vegetation data

Format: Comma separated values

Field name	Format	Description
Site	Numeric	Site code - number between 1 and 103
Plot	Numeric	Plot number between 1 and 16
BRC_number	Numeric	Code number of species (according to Biological Record Centre species list)
BRC_names	Text	Scientific name of species. Note: <i>In the 2000s records, bare ground/litter/water/rock/mud have been amalgamated into one category due to inconsistent recording, therefore there may be several entries for the same code in one plot.</i>
Amalgams	Numeric	The field contains BRC codes for species as in the BRC_number field. Here though, selected species are grouped together into cross-specific taxa reflecting inconsistent recording and prior knowledge of difficulty in their separation e.g. <i>Viola riviniana/reichenbachiana</i> or <i>Cardamine hirsuta/flexuosa</i> .
Amalgam_names	Text	Scientific name of amalgam species.
NEST	Numeric	1 indicates an estimate applying to the inner 2x2m plot nest. The nest number was often not filled in consistently but the presence of the cover estimate in the Q2 column of the recording form indicates that the estimate applied to the whole plot (see field handbook). This field is not present in the 1971 records.
COV	Numeric	A percentage cover estimate for the whole plot area. Note that 0.5 = species present at less than 1% cover. -1 = present (bare ground/litter/wood/rock/total bry/water). Null values correspond to woody species (with individuals >1.3m) since these were recorded in terms of numbers of individuals and DBH. For completeness all species records (trees, shrubs, saplings, bryophytes and herbaceous species) are included in this table.
YR	Numeric	The year of survey; 1971, 2000 (pilot sites), 2002 or 2003.
Yr_2	Numeric	Year code: either yr 1 (1971) or yr 2 (2000, 2002, 2003)
Bryo	Text	b=bryophyte species, l-lichen species
Woody	Text	w = woody species
Field_sheet	Text	Sheet on which original data was recorded ("Ground flora" - Plot ground flora data)

Woodlands Survey Soil Data 1971 2001

Description: Plot soil data. Results of soil analyses undertaken at CEH Merlewood, Soil Ecology Section.

Format: Comma separated values

Field name	Format	Description
Site	Numeric	Site code - number between 1 and 103
Plot	Numeric	Plot number between 1 and 16
pH1971	Numeric	Soil pH in 1971
pH2003	Numeric	Soil pH in 2003
pH1971_QA_repeats	Numeric	Repeat pH measurements carried out in 2000 on a subset of archived 1971 soil samples
SOM1971	Numeric	Soil Organic Matter in 1971 (%)
SOM2003	Numeric	Soil Organic Matter in the resurvey (%)
SOM1971_QArepeats	Numeric	Repeat SOM measurements carried out in 2000 on a subset of archived 1971 soil samples (%)
MSG	Numeric	Major Soil Group code (according to Avery, 1973)
SG	Numeric	Soil Group code (according to Avery, 1973)
SSG	Numeric	Soil Sub-group code (according to Avery, 1973)
Major_Soil_Group	Text	Major Soil Group description (according to Avery, 1973)
Soil_Group	Text	Soil Group description (according to Avery, 1973)
Soil_subgroup	Text	Soil Sub-group description (according to Avery, 1973)

3. References

Avery, B. W. (1973), Soil Classification in the Soil Survey of England and Wales. *Journal of Soil Science*, 24: 324-338

Corney, PM, LeDuc, ML, Smart, SM, Kirby, KJ, Bunce, RGH, Marrs, RH (2004) The effect of landscape-scale environmental drivers on the vegetation composition of British woodlands. *Biological Conservation* 15, 200-215.

Haines-Young, R.H., Barr, C.J., Firbank, L.G., Furse, M., Howard, D.C., McGowan, G., Petit, S., Smart, S.M., Watkins, J.W. (2003) Changing landscapes, habitats and vegetation diversity across Great Britain. *Journal of Environmental Management* 67, 267-281.

Kirby, K.J., Smart, S.M., Black, H.I.J., Bunce, R.G.H., Corney, P.M., Smithers, R.J. (2005) Measuring Long Term Ecological Change in British woodlands (1971-2001): A re-survey and analysis of change based on the 103 sites in the ITE/NCC 'Bunce 1971' woodland survey. English Nature Research Reports 653.