

Caves and Karst of the Yorkshire Dales



Edited by Tony Waltham and David Lowe

Volume 1

for the British Cave Research Association

Caves and Karst of the Yorkshire Dales



Volume 2
The Caves

Edited by **Tony Waltham and David Lowe**
for the British Cave Research Association

Caves and Karst of the Yorkshire Dales

Edited by

Tony Waltham and David Lowe

British Cave Research Association

Caves and Karst of the Yorkshire Dales

Copyright © British Cave Research Association

Published by British Cave Research Association,
The Old Methodist Chapel, Great Hucklow, Buxton SK17 8RG, UK
www.bcra.org.uk/bookshop
publications-sales@bcra.org.uk
BCRA is a UK registered charity, number 267828

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical or other means, including photocopying and recording, subject to statutory exception, or by any information storage or retrieval system, without permission in writing from the publisher.

Copyright on the texts, photographs and drawings resides with the respective authors, and copyright of the design and layout is owned by BCRA.

Editors: Tony Waltham and David Lowe
Graphics and artwork: Tony Waltham
Photograph preparation: Jerry Wooldridge
Design and layout: Tony Waltham and David Lowe

Volume 1
ISBN 978-0-900265-46-4 (paperback)
ISBN 978-0-900265-47-1 (hardback)
Published 2013

Volume 2
ISBN 978-0-900265-48-8 (paperback)
ISBN 978-0-900265-51-8 (hardback)
Published 2017

Printed by John Browns, Nottingham

Cover photographs:

Volume 1

Front: above: Kilnsey Crag, Wharfedale (Tony Waltham)
below: High-level passage in Boreham Cave (Clive Westlake)
right: Shaft in Hurnel Moss Pot (John Forder)
Back: above: Ingleborough and pavements on Scales Moor (Tony Waltham)
below: Pool in the main streamway of Lancaster Hole (Paul Deakin)

Volume 2

Front: above: High-level gallery in the Ease Gill Cave System (John Dale)
below: Main streamway in Penyghent Pot (Paul Deakin)
right: Lower rift passage in Alum Pot (Paul Deakin)
Back: above: Limestone pavement on Ingleborough (Tony Waltham)
below: Pool in the main streamway of Lancaster Hole (Mark Burkey)

Caves and Karst of the Yorkshire Dales

The Chapters

Volume 1		<i>page</i>
1	The Yorkshire Dales , Tony Waltham and David Lowe	1
2	Geology of the limestones , Colin Waters and David Lowe	11
3	Glaciation and Quaternary evolution , Wishart Mitchell	29
4	Karst geomorphology , Tony Waltham	65
5	Limestone pavements , Simon Webb	93
6	Travertine and tufa , Allan Pentecost	111
7	Cave geomorphology , Tony Waltham and Phil Murphy	117
8	Geological influences on the caves , David Lowe	147
9	Hydrogeology of the karst , John Gunn and Simon Bottrell	153
10	Chronology of the caves , Alf Latham and Derek Ford	169
11	Speleothems and palaeoclimates , Tim Atkinson and Phil Hopley	181
12	Holocene environments , Margaret Atherden	187
13	Subterranean biology , Graham Proudlove	199
14	Bats in the caves , John Altringham and Anita Glover	219
15	Cave palaeontology , Terry O'Connor and Tom Lord	225
16	Cave archaeology , Tom Lord and John Howard	239
 Volume 2		
17	Caves of Dentdale and Wild Boar Fell , Roy Holmes	257
18	Caves of Barbondale , Hugh St.Lawrence	273
19	Cave systems of Ease Gill , Paul Swire	281
20	Caves of Leck Fell and Ireby Fell , Tony Waltham and Tim Allen	305
21	Caves of Kingsdale , Dave Brook	331
22	Caves of Ingleborough , compiled by Tony Waltham and Dave Brook	349
	White Scars and Newby Moss , Tony Waltham and Ged Campion	350
	The Allotment and Ribblesdale , Dave Brook and Tony Waltham	363
	Chapel-le-Dale and Ribblehead , Dave Brook and Phil Murphy	374
23	The Gaping Gill Cave System , Dave Brook and Tony Waltham	389
24	Caves of Pen-y-ghent and Fountains Fell , Graham Proudlove and Tony Waltham	413
25	Caves and karst of Malham and Settle , Phil Murphy	437
26	Caves of Wharfedale and Littondale , Harry Long	453
27	Caves of Grassington Moor , Dave Brook and Phil Murphy	477
28	Caves from Greenhow Hill to Cracoe , Harry Long	491
29	Caves of Nidderdale , Chris Fox	499
30	Caves of Wensleydale , Tony Harrison and Pete Ryder	511
31	Caves of Swaledale , Tony Harrison and Pete Ryder	523
32	Caves of the Northern Pennines , Pete Ryder and Tony Harrison	537
33	Caves of the North York Moors , John Dale and Carl Thomas	557

Contents

Chapter 1. The Yorkshire Dales	1	Sinks and risings of the limestone benches	78
Geography of the Dales	1	Dolines and shakeholes	80
Geology of the limestone	1	Dolines in bedrock	80
<i>The Great Scar Limestone</i>	3	Shakeholes within the soil cover	83
Climate	4	Valleys and gorges	85
Countryside	4	Malham and Gordale	89
<i>Quaternary chronology</i>	5	Chapter 5. Limestone pavements	93
Geomorphology of the Dales	6	Limestone pavement as glaciokarst	93
Caves in the Dales	7	Role of soils in pavement development	96
Exploration of the caves	8	<i>Pavements and karren</i>	96
Cave research	8	Clints grikes and runnels	97
Karst adjacent to the Dales	9	<i>Terminology of karren</i>	98
Chapter 2. Geology of the limestones	11	Major pavements of the Yorkshire Dales	100
Lower Palaeozoic basement	11	Pavements of Ingleborough	101
<i>Basement topography and basal conglomerate</i>	12	Eastern Ingleborough	101
Limestones of the Ravenstonedale Group	13	Western Ingleborough	101
<i>Glossary</i>	13	Pavements of Scales Moor and Twisleton	102
Great Scar Limestone Group	16	Pavements of Malham and High Mark	103
<i>Limestone cycles and the Porcellanous Bed</i>	19	Pavements of Wharfedale	104
<i>Geological research and mapping</i>	20	Pavements of the Morecambe Bay area	104
Succession in the southern Dales	20	Pavements of Hutton Roof and Farleton Fell	106
Limestones of the Greenhow inlier	22	Pavements of the Lake District Fringe	108
Limestones in the Yoredale Group	22	Conservation of the pavements	109
Millstone Grit	23	Chapter 6. Travertine and tufa	111
Geological structure	24	<i>Tufa and travertine</i>	111
Joints and faults within the Askrigg Block	25	<i>Travertine sites within the Yorkshire Dales</i>	112
Minerals and mining	26	Travertine distribution in the Dales	113
Superficial deposits	28	Travertine morphologies	114
Chapter 3. Glaciation and Quaternary evolution	29	Chapter 7. Cave geomorphology	117
<i>Definitions and acronyms</i>	30	Active vadose caves	118
Long-term evolution of the pre-glacial landscape	31	<i>Research in cave geomorphology</i>	119
Ice and landscape development	33	Active phreatic caves	121
Evidence of earlier glaciations	37	Cave development at the water table	123
The Last (Devensian) cold stage	38	Erosion rates and cave enlargement	124
The last British-Irish Ice Sheet	40	Abandoned cave passages	125
Devensian glaciation of the Yorkshire Dales	42	Geological influences on the cave systems	128
The Dales Ice Centre	42	Shale beds and inception horizons	128
Ice sheet landforms	44	Joints and faults	130
The Craven Uplands	47	Caves within the Yoredale limestones	131
Meltwater channels	49	Hydrological features of cave development	133
Moraines and glacial retreat	51	Filling and destruction of the caves	135
A chronology for the last glaciation	54	Bedrock breakdown and cave chambers	135
Last Glacial–Interglacial Transition	56	Clastic cave sediments	137
<i>Deglaciation of the Dales</i>	59	Cave deposits from solution	138
Chapter 4. Karst geomorphology	65	Evolution of the Dales caves	140
The limestone benches	65	The first generation of caves	141
Incision of the dales	69	The caves beneath the Pleistocene ice	143
Initiation of the Dales karst	71	Chapter 8. Geological influences on the caves	147
Limestone dissolution	73	Inception horizons in limestone	147
Karst denudation rates	74	Timescales of inception	148
Denudation rates estimated from pedestal heights	75	Shale beds as inception horizons	149
<i>Progress in karst geomorphology</i>	75	Inception in the Great Scar Limestone	149
Streams, sinks, potholes and risings	76	Further inception horizons and structures	150
The main river courses	76	Influence of the inception stage	152

Chapter 9. Hydrogeology of the karst	153	Dales mine faunas from the Hazelton dataset	204
Porosity and permeability of the limestone	153	Comparison of caves with mines	205
Recharge into the limestone	155	Species recorded from caves and mines	205
Allogenic recharge into the karst	155	Non-arthropod taxa	205
Autogenic recharge into the karst	156	Arthropoda: Arachnida	206
Water storage within the limestone	157	Arthropoda: Crustacea	208
Flow through the limestone	159	Arthropoda: Insecta	210
Discharge from the limestone springs	160	Arthropoda: Myriapoda	213
Geological influences on the karst drainage	162	Chordata: fishes	214
Hydrogeology of Keld Head, Kingsdale	164	Ecological composition of the subterranean fauna	214
Groundwater flow at Malham	166	Further studies of Dales caves and mines	214
Karst water resources in the Dales	167	Origin of the Dales subterranean fauna	216
		Research and conservation	216
Chapter 10. Chronology of the caves	169	Chapter 14. Bats in the caves	219
Uranium–thorium dating	169	A year in the life of a Dales bat	219
Uranium–lead dating	170	Swarming and hibernation	219
Alternative dating methods	170	<i>British bat species</i>	220
Carbon-14 dating	170	Bat species in the Dales caves	220
Luminescence dating	171	Daubenton’s bat	220
Electron spin resonance dating	171	Natterer’s bat	221
Aluminium–beryllium dating	171	Brandt’s bat and whiskered bat	221
Cosmogenic chlorine dating	172	Alcathoe bat	221
Palaeomagnetic dating	172	Brown long-eared bat	221
Palynology	173	Dales bats and Dales caves	222
Speleothems and glacial cycles	173	Conservation	224
Dales caves and the Quaternary record	175	Chapter 15. Cave palaeontology	225
Rates of entrenchment of the dales	177	Early excavations	226
Rates of incision in cave streamways	178	Pre-Last Interglacial fauna	227
Future prospects	178	Last Interglacial	227
Chapter 11. Speleothems and palaeoclimates	181	Victoria Cave	227
A stalagmite from Lancaster Hole	181	Raygill Fissure	228
Magnesium and strontium	182	The interglacial environment	230
Carbon-13	183	Later MIS 5 from 114 to 74 ka	230
<i>Isotopes</i>	183	Stump Cross Caverns	231
Oxygen-18	183	Away from Stump Cross	233
Interpretation of the climatic signals	184	The missing Mammoth Steppe Fauna	234
Beyond Lancaster Hole	185	The Lateglacial Interstadial	234
Chapter 12. Holocene environments	187	The Holocene	235
Soil development	187	The present and the future	237
Loessic soils on the limestone	187	Chapter 16. Cave archaeology	239
<i>Plant research in the Dales</i>	188	Radiocarbon dating of materials	239
Peat mires and blanket peat	189	The first people in the Yorkshire Dales	239
Human influences on the soils	190	Early Mesolithic, 9600 to 8000 BC	241
Plant development	190	Later Mesolithic, 8000 to 3800 BC	241
The Lateglacial period	191	Early Neolithic, 4000 to 3200 BC	243
The early Holocene period	191	Later Neolithic, 3200 to 2600 BC	244
The mid-Holocene period	192	Earlier Bronze Age, 2600 to 1400 BC	245
The late Holocene period	193	Later Bronze Age, 1400 to 600 BC	246
The modern plant cover	195	Iron Age, 600 BC to AD 100	246
The future landscape	198	Romano-British, AD 100 to 450	247
Chapter 13. Subterranean biology	199	Early Mediaeval, AD 400 to 1000	248
Analysis of the Hazelton dataset	199	Mid and Later Mediaeval, AD 1000 to 1500	249
Dales cave faunas from the Hazelton dataset	200	Post-Mediaeval, AD 1500 onwards	249
<i>Subterranean biology in the Yorkshire Dales</i>	200	Index to localities and site locations	252
<i>Terminology and ecological classification</i>	201		

Contents

Chapter 17. Caves of Dentdale and Wild Boar Fell	257	<i>Exploration history</i>	339
Dentdale	257	Caves of East Kingsdale	340
Caves in Upper Dentdale	259	Underwater caves behind Keld Head	343
The Ibbeth Peril Cave System	259	Caves beneath Scales Moor	344
Caves of Nirvana and Hackergill	263	Development of the Kingsdale caves	345
<i>Exploration history</i>	264	Cave development under the western bench	345
Upper Dentdale resurgences	264	Cave development under the eastern bench	346
Caves in Lower Dentdale	265	<i>Geological influences in the Kingsdale caves</i>	347
<i>Mineral vein screens within the caves</i>	265	Evolution of Kingsdale's resurgences	347
Great Knoutberry Hill	266	The cave links with Chapel-le-Dale	348
Wild Boar Fell	268	Chapter 22. Caves of Ingleborough	349
Caves of the Rawthey Valley	269	White Scars and Newby Moss	350
Caves of Mallerstang	271	White Scar Cave	351
Chapter 18. Caves of Barbondale	273	Lead Mine Moss and the shale margin	354
Geology	273	<i>Exploration history</i>	354
Geomorphology	273	<i>The geology of Tatham Wife Hole</i>	355
Hydrology	275	Dowlass Moss and Skirwith Cave	355
<i>Exploration history</i>	276	Potholes of western Newby Moss	358
Caves of the Barkin Gills	277	Caves of eastern Newby Moss	360
Caves around Short Gill	279	The Allotment and Ribblesdale	363
Shorter caves in the dale	280	Potholes of The Allotment	363
Chapter 19. Cave systems of Ease Gill	281	<i>Exploration history</i>	367
The Ease Gill valley	281	Early cave development under The Allotment	368
Inlet caves from Upper Ease Gill	284	The Moughton bench	369
<i>Exploration history</i>	285	The cave system of Alum Pot	370
County Pot and nearby caves	286	<i>The Alum Pot fault</i>	372
The trunk passages to Lancaster Hole	289	Caves north and south of Alum Pot	373
Lancaster Hole and Cow Pot	292	Chapel-le-Dale and Ribblesdale	374
Aygill Caverns and Bull Pot of the Witches	294	Caves of the Southerscales bench	374
The Stake Pot Series in Lancaster Hole	296	Caves and potholes around Meregill Hole	376
Link Pot	296	<i>Exploration history</i>	377
Pippikin Pot	298	Sunset Hole and caves farther north	378
The caves of Lower Ease Gill	300	Evolution of the bench caves	379
Evolution of the cave systems	301	Caves behind God's Bridge	381
Chapter 20. Caves of Leck Fell and Ireby Fell	305	Caves of Winterscales Beck and Bruntscar	384
Rift Pot and Large Pot	307	Caves of Ribblesdale	386
Ireby Fell Cavern	311	Chapter 23. The Gaping Gill Cave System	389
Notts Pot and its inlets	313	The Ingleborough karst	389
<i>Exploration history</i>	316	Main Shaft and Main Chamber	390
Lost John's Cave and its inlets	317	Cave passages of Gaping Gill	392
<i>The name of Lost John's Cave</i>	318	The inlet potholes	393
Gavel Pot and its inlets	320	<i>Fractures, faults and joints at Gaping Gill</i>	397
Witches Cave and Leck Beck Head	321	East Passage and Whitsun Series	398
Evolution of the caves	324	Passages west and south of Main Chamber	400
Stage 0: the inception cavities	324	Hensler's Passages and Far Country	401
Stage 1: the initial phreatic network	324	The active phreatic caves	404
Stage 2: Duke Street and Eastern Front	324	<i>Exploration history</i>	405
<i>Flow direction in Duke Street and Eastern Front</i>	326	Ingleborough Cave	405
Stage 3: Notts Pot Master Cave	327	Evolution of the cave passages	408
<i>Geological influences on caves under Leck Fell</i>	328	Earlier stages of phreatic development	409
Stage 4: Leck Fell Master Cave	329	Later stages with vadose development	410
Chapter 21. Caves of Kingsdale	331	Chapter 24. Caves of Pen-y-ghent and Fountains Fell	413
Caves of West Kingsdale	332	Geology of the limestone	413
Caves around Kingsdale Head	338	Geomorphology of the karst	414
		Hydrology of the caves	416

Brants Gill Head and the resurgence caves	418	<i>Exploration history</i>	501
Caves of Fountains Fell	418	Goyden Pot	502
<i>Exploration history</i>	421	New Goyden Pot	504
Caves of Pen-y-ghent	425	Nidd Heads	505
Penyghent Pot	428	Hydrology of the caves along the River Nidd	506
<i>Flow changes in and around Penyghent Pot</i>	429	Evolution of the caves along the River Nidd	507
Caves draining to New Houses Risings	430	<i>Cave development across the faults</i>	507
Caves draining to Turn Dub	431	Caves in the Lofthouse Inlier	509
The Birkwith Cave System	432	Chapter 30. Caves of Wensleydale	511
<i>The perching of the Birkwith Cave System</i>	433	Geology and karst in Wensleydale	511
Caves of Browgill and Ling Gill	433	<i>Exploration history</i>	514
Minor caves in the Yoredale limestones	434	Caves of Upper Wensleydale	515
Evolution of the caves	434	<i>The evolution of Fossdale Beck Cave</i>	515
Geological influences on cave development	435	Caves of Wensleydale's northern slopes	517
Chapter 25. Caves and karst of Malham and Settle	437	<i>Fissure development in Ackrey Gill Cave</i>	517
Geology of the Craven Fault Zone	437	Caves of the southern tributary dales	518
Geomorphology	439	Caves of Coverdale	520
Karst geomorphology	441	<i>Block collapse in Scrafton Pot</i>	521
Hydrology of the Malham karst	442	Chapter 31. Caves of Swaledale	523
Caves in the Malham catchment	445	Caves along Swaledale	524
<i>The unknown caves of Malham</i>	446	<i>Exploration history</i>	528
Caves around Attermire	447	Devis Hole Mine Caves	529
<i>Exploration history</i>	448	<i>Origins of the maze caves</i>	530
Caves of Giggleswick Scar	451	Caves in Arkengarthdale	532
Chapter 26. Caves of Wharfedale and Littondale	453	<i>Lead miners in the caves</i>	534
Caves of Langstrothdale	453	Faggergill Mine Caves	534
<i>Exploration history</i>	456	Chapter 32. Caves of the Northern Pennines	537
Caves of Upper Wharfedale	457	Karst geomorphology	539
Caves of Littondale	461	<i>The Northern Pennines AONB and Geopark</i>	540
<i>Past events in Boreham Cave</i>	466	Caves of Gretadale	541
Caves of Pen-y-ghent Gill	467	Caves of Teesdale	541
<i>Geological guidance in Out Sleets Beck Pot</i>	470	<i>Sugar limestone and its rare plants</i>	542
<i>Crossing drainage in Littondale</i>	471	Caves in Upper Teesdale	543
Caves of Darnbrook and Hawkswick	471	Caves along the flanks of Teesdale	543
The phreatic lifts in Sleets Gill Cave	475	Caves of Weardale	544
Chapter 27. Caves of Grassington Moor	477	Caves in Lower Weardale	545
The karst landscape	477	Caves around Alston	547
<i>Caprock dolines in the Grassington Grit</i>	479	Caves of Alston Moor	547
The karst hydrology	480	<i>Exploration history</i>	547
Mosssdale Caverns	481	Hudgill Burn Mine Caverns	548
Evolution of the passages in Mosssdale Caverns	484	<i>Manganese deposits in Hudgill Burn Mine Caverns</i>	551
Associated caves on Grassington Moor	485	Caves of the Allendales	552
Langcliffe Pot	487	Caves along the Pennine Escarpment	552
Evolution of the passages in Langcliffe Pot	488	Caves high on the Escarpment	554
Nearby caves on Conistone Moor	488	Chapter 33. Caves of the North York Moors	557
<i>Exploration history</i>	489	Geology of the limestone hills	557
The resurgence caves	489	<i>Oolites and oolitic limestones</i>	558
Chapter 28. Caves from Greenhow Hill to Cracoe	491	Caves and karst within the Tabular Hills	560
The caves of Stump Cross	493	Active stream caves	561
<i>Exploration history</i>	494	<i>Exploration history</i>	562
Karst on Greenhow Hill	497	Abandoned cave passages	564
Caves of Trollers Gill	497	Windypits in the Hambleton Hills	566
Caves in the knoll reefs	498	The Ryedale windypits	567
Chapter 29. Caves of Nidderdale	499	Outlying windypits and fissures	568
Manchester Hole	500	Index to localities and locations	570

Preface

The British Cave Research Association has a double interest in the Yorkshire Dales. Perhaps first as the major area within Britain for sport caving, cave exploration and cave study. But also for the magnificent glaciokarst landscapes of the Dales and the vital role that the caves, in particular their dateable stalagmites, make to regional studies of landscape evolution.

This book covers both the descriptive and the scientific aspects of both the caves and the karst landforms of the Dales. Its writing and editing have then had the double target of maintaining sound academic standards in its data recording and also of presenting its material in a style that is readable and comprehensible by the non-specialist. It is the first in a series of new books that will cover the caves and landforms of all the main karst areas within Britain.

The book has no comprehensive glossary, as readers are directed to the *Dictionary of Karst and Caves*, which is published within the BCRA Cave Studies Series, and was compiled by the two editors of this volume. A few chapters have their own mini glossaries for acronyms and terms that may be unfamiliar to some readers.

Locations of caves and landforms are not described in detail within the text, but the comprehensive Index to Localities contains the National Grid References of all named sites.

Acknowledgements

Credit goes to Phil Murphy for initiating the project to produce this book as a successor to the BCRA's earlier volume *Limestones and Caves of North-West England*, which had been published in 1974 and was long out of print and out of date. Together with David Judson, he gathered authors for various chapters, and they established the broad structure of the book, based largely on the 1974 volume. However, the huge advances in scientific studies of the Dales caves meant that the project grew like Topsy, and grew beyond their means, so they eventually handed over to the present editors. Their initial work is recognised with gratitude, and they remain as contributing authors on chapters within the two volumes into which the project has expanded.

The editors offer their thanks to the many colleagues and friends who have contributed to the preparation of this book in various ways, and to whom due credit is afforded.

Some authors have been with the project from its initiation, while others were invited to join at later stages. Sincere thanks are due to all the authors, as it is they who have provided the material that has made the book both possible and worthwhile.

All chapters have been peer reviewed, and the referees are thanked for their helpful comments. Tim Atkinson, Vanessa Banks, Dave Brook, Andrew Chamberlain, Tony Cooper, John Cordingley, Silvia Dacre, Andy Farrant, Trevor Faulkner, Trevor Ford, Helen Goldie, John Gunn, Ric Halliwell, Alan King, Harry Long, Terry O'Connor, Hannah O'Regan, Martyn Pedley, Richard Shaw, Mike Simms, Graeme Swindles, Chris Thomas, John Thorp, Heather Viles, Paul Wood and Steve Worthington are all thanked for their reviews of individual chapters.

Special thanks are due to four colleagues who have given extensive support that has gone well beyond the call of duty, namely Harry Long and John Cordingley with their encyclopaedic knowledge of the Dales and its caves, John Thorp with his great knowledge of the cave palaeontology and archaeology, and Trevor Faulkner with his archival knowledge of the scientific literature. Also, many thanks to Andrew Rigby who has astutely guided the book into its final printing.

Numerous friends have generously contributed photographs to the book, many in response to request lists sent round by the editors. Thanks are due to all of them; credits for all photographs are given in the captions, though only initials are cited where the credit is to either the chapter authors or the volume editors. Sincere gratitude is also accorded to Jerry Wooldridge, who improved, adjusted and balanced all the photographs where appropriate, and thereby greatly reduced the workload of the editors.

Diagrams and artwork have largely been provided by the chapter authors and then re-worked into house style, with sources credited in the captions where appropriate.

Cave surveys are the work of innumerable cavers, frequently in very cold and very wet conditions underground. Without their efforts, there would be no database for the scientific studies. The many individual cavers are credited by their club names on surveys of specific caves, but the area maps that show numerous caves are compiled from multiple sources and credit is due to too many to name.

Tony Waltham and David Lowe

Preface to Volume Two

This volume is intended to present a definitive description of the main caves that were known, at the time of publication, in and around the Yorkshire Dales. There are still great lengths of cave passage awaiting discovery and exploration, and cavers can suggest where many could lie. Speculation on undiscovered caves has been limited within these pages, but is included where considered particularly useful, and then is clearly qualified as only probable or possible. It is beyond question that more caves will be discovered during the lifetime of this book; indeed it is hoped that these pages might encourage new explorations by improving understanding of the Yorkshire Dales karst.

Coverage within the volume extends outside the Yorkshire Dales in order to include nearly all the significant caves in the North of England. There are chapters on the caves in Carboniferous limestones in the Northern Pennines, and on those in the Jurassic limestones of the North York Moors. Major parts of the Three Counties Cave System lie in Lancashire and Cumbria, though they are now within the Yorkshire Dales National Park (which was extended after publication of Volume One). The caves in the Morecambe Bay karst are not included because there have been no new explorations, nor research, since they were described comprehensively in the 1974 publication (see below).

References to published works are intended to be comprehensive but not exhaustive; they include all the important sources, but omit many earlier sources that are cited within their successors. Automatic reference to some key sources is implied, but to avoid excessive repetition these are cited only where particularly significant. Invaluable details are in the two series of cavers' guides, both under the title of *Northern Caves*; the first series was prepared by Dave Brook and friends, as three volumes published by Dalesman in 1988–1994; the second series is compiled by Sam Allshorn, Paul Swire and friends, with the first volume published by Wild Places in 2017 and two more volumes due to follow. Details of all underwater caves are available in the *Northern Sump Index*, compiled by Elaine Hill and Adrian Hall and published in 2015 by the Cave Diving Group. The on-line cavemaps.org provides invaluable access or source information for most cave surveys.

Cross references to material in Volume One of this book are noted only where especially significant; many other themes and items overlap or are developed further within the chapters of that volume. This book's 1974 predecessor, *Limestones and Caves of North-west England* (edited by Tony Waltham, and published by David and Charles) is not generally cited as background material, but does contain more detailed descriptions of some sites.

The area maps in this volume are not new surveys, but should be regarded only as compilations of the best available data; they have been prepared from multiple sources, and some original cave maps have been slightly distorted and adjusted to achieve a best fit. Topographical data have been extracted from published maps, satellite images and some detailed mapping by cavers. Geological data are largely from maps published by the British Geological Survey and others, and have been simplified and adjusted to relate to the karst geomorphology. Some minor features, above and below ground, have been omitted to improve clarity, and cave passages are shown over roads and streams, even though they are underneath, because they are the primary features

of the maps. Maps are not at standard scales because they have to fit the pages, but pdfs of the area maps at appropriate scales will become available on-line at bcra.org.uk.

On most maps, altitude data are presented only as spot heights. For those not familiar with the terrain, the outline topography is recognisable on the area maps of the Craven Dales (in chapters 18–24 and 26–27), where the limestone is close to horizontal with its shale cover above about 400m altitude and its basement floor below 200m; this does not apply at Malham and in the outlying areas.

The overview maps in this volume show the main limestone unit that is a geomorphological entity with respect to the karst; this consists of the Great Scar Limestone Group together with various limestones in the lower part of the Yoredale Group that are locally contiguous with it, mostly just the Hawes Limestone, but also the Gayle Limestone and the Hardraw Scar Limestone in some areas. The stratigraphy is different in Wensleydale and farther north, where appropriate simplifications are used in their chapters to avoid some highly convoluted terminology (see Chapter 2).

Within this volume, the terms *doline* and *shakehole* are almost interchangeable. Doline is the correct name for a small depression in karst, but shakehole is the locally correct name for a subsidence doline within the till cover (though it should not be applied to collapse dolines in bedrock).

Acknowledgements

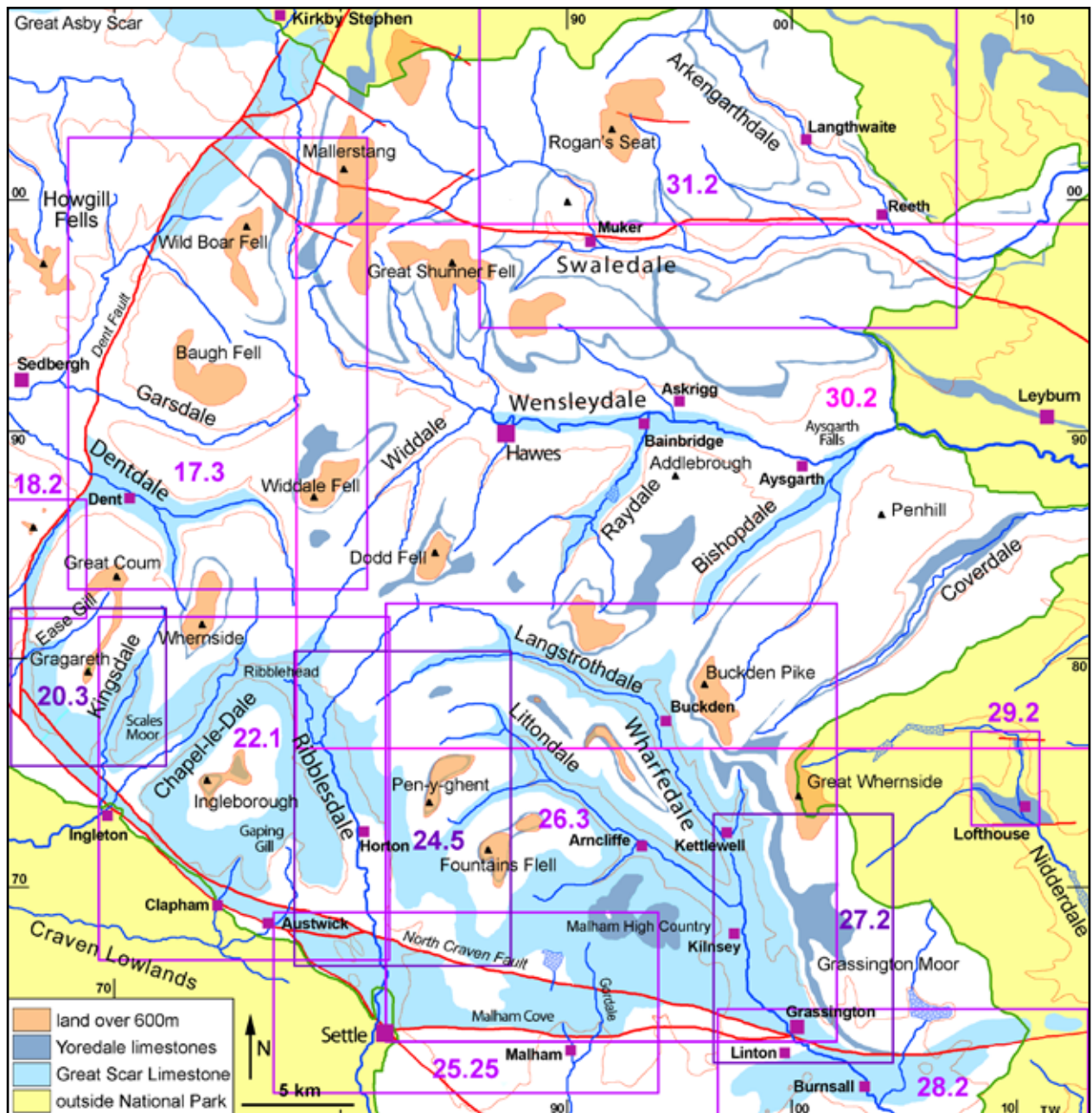
Production of this book has been a team effort, with many uncredited contributions by friends, by authors of other chapters and by the editors. Special thanks go to John Cordingley and Harry Long, who became members of an editorial team, for their invaluable reviews and insightful improvements to all the chapters. Thanks are also due to Andy Walsh, Dave Judson and Dave Carlisle who had significant inputs to chapters 22, 27 and 31 respectively, and to Paul Monico, Graham Proudlove, Phil Murphy, Dave Brook, John Thorp, Tony Harrison and the late Trevor Ford, who each reviewed various chapters.

It would be impossible to list the huge number of cavers who have been involved in surveying the caves, and who are credited only through the names of their clubs; due thanks are accorded for their labours underground, without which the compilation of maps for both volumes of this book would have been impossible. Special thanks go to Becca Lawson and Ray Duffy for their major survey compilations across some of the larger cave systems.

More than 100 cavers have generously contributed photographs to this volume, many in response to request lists circulated by the editors. Thanks are due to all of them; credits for all photographs are given in the captions, though only initials are cited where the credit is to either the chapter authors or the volume editors. Special thanks go to the late Paul Deakin, whose legacy lives on in the great archive of cave photographs that he left to be used freely in BCRA publications, to John Dale who produced so many photographs at the editors' request, and to Jerry Wooldridge, who improved, cleaned, adjusted and balanced all the photographs where necessary and appropriate, and thereby greatly reduced the workload of the editors.

And special thanks to Jan Waltham; this book would never have happened without her unstinting support during the ridiculous amount of time that her husband spent on its compilation.

Tony Waltham and David Lowe



Areas covered in the chapters within Volume Two. The frames and figure numbers in shades of purple show the coverage of the purple maps within each chapter. The Northern Pennines continue directly northwards from the area on this map, and the North York Moors lie 35 km away to the east. The Three Counties Cave System is covered by Figure 20.3, which also appears as Figures 19.2 and 21.3. This map also shows the boundary of the Yorkshire Dales National Park that includes its extension added in 2016.

Acronyms of caving clubs that produced surveys

BCC: Burnley Caving Club.
BCRA: British Cave Research Association.
BPC: Bradford Pothole Club.
BSA: British Speleological Association.
BSD: Black Sheep Diggers.
BUSS: Birmingham University Speleological Society.
CDG: Cave Diving Group.
CPC: Craven Pothole Club.
CUCC: Cambridge University Caving Club.
DHSS: Dent House Speleological Society.
ECC: Eccles Caving Club.
EMRG: Earby Mines Research Group.
EPC: Earby Pothole Club.
GC: Gritstone Club.
HWPC: Happy Wanderers Cave and Pothole Club.
KCC: Kendal Caving Club.

LUCC: London University Caving Clubs.
LUSS: Lancaster University Speleological Society.
LUST: Loughborough University Speleological Team.
MMMMC: Misty Mountain Mud Miners Corporation.
MSG: Moldywarps Speleological Group.
MUSS: Manchester University Speleological Society.
NCC: Northern Cave Club.
NPC: Northern Pennine Club.
NSG: Northern Speleological Group.
NYMCC: North York Moors Caving Club.
PCC: Preston Caving Club.
RRCPC: Red Rose Cave and Pothole Club.
SUSS: Sheffield University Speleological Society.
ULSA: University of Leeds Speleological Association.
WRPC: White Rose Pothole Club.
YCC: York Caving Club.
YRC: Yorkshire Ramblers' Club.

Index to localities

with site locations by National Grid Reference

All NGRs are approximate, and SD unless stated otherwise.

Caves are located by positions of their main entrances.

Within Volume 2, only the main pages are listed for each site, as the text contains calls to the maps and photographs, and many descriptions continue onto following pages.

Pages 1–256 are in Volume 1; pages 257–569 are in Volume 2.

Many caves and landforms are on private land, and inclusion in this listing does not indicate or imply any right of access.

- Ackrey Gill Cave 820951 515, 517
 Addlebrough 945881 50, 513
 Aire Head 901622 73, 77, 159, 161, 166, 442
 Allithwaite Cave 390759 201
 Allotment 763734 24, 363
 Alston Block NY840380 22, 537
 Alston Moor NY7320460 547
 Altar Cave NY993352 547
 Alum Pot 775756 78, 79, 151, 164, 201, 370, 372
 Angerholme Cave 771982 271
 Antofts Windypit SE582829 567
 Aquamole Pot 698774 335
 Arcow Wood Caves 901707 242, 243, 249, 369
 Arkengarthdale NZ020020 42, 112, 195, 532
 Arnside 457787 9, 105
 Arthington SE265445 49
 Ashberry Windypit SE570850 567
 Ashtree Hole 665791 84
 Askrigg Block 950910 15, 24, 32, 33, 36, 43, 48, 147, 148
 Attermire Cave 841642 247, 248, 249, 449
 Attermire Scar 840645 25, 36, 72, 448
 Austwick Beck Head 776718 79, 134, 161, 368
 Avon Pot 661813 295
 Aygill Cave NY887003 525
 Aygill Caverns 663818 280, 294
 Ayleburn Caves and Pot NY730499 547
 Ayleburn Mine Cave NY724497 547
 Aysgarth Falls SE013886 52, 77, 194
- Badger Cave 903643 246
 Bank Holiday Hole 677806 286
 Bar Pot 752723 81, 222, 396, 410
 Barbon Fell 648815 11
 Barbon Pot 666838 279
 Barbondale 670850 35, 112, 273
 Barden Fell SE085600 23, 80, 491
 Bargh's Cave 751768 379
 Bargh's Pot 751768 379
 Barkin Gill 666840 277
 Barras End Mine cNY985008 529
 Batty Cave 706795 338
 Batty Wife Cave 764791 387
 Baugh Fell 730920 34-36, 42, 46-49, 54, 59
 Bax Pot SE099761 501
 Bear Park SE007891 52
 Beck Head Stream Cave 754711 406
 Beckermonds 874802 16, 17, 104, d453
 Beckermonds Pots 868799 453
 Bedstead Pot 694776 333
 Benfoot Sink SE007705 479, 489
 Big Meanie 667791 320
 Big Sandy Sink SE709880 561
 Birkett's Well 693760 343
 Birks Fell Cave 931769 131, 457
 Birks Wood Cave 940757 131, 457
 Birkwith Cave 804769 79, 134, 135, 432, 433
 Bishopdale 980850 48, 52, 519
 Bishopdale Gavel Pots 965813 519
- Black Bank Sink 781804 386
 Black Dub Cave 737862 264
 Black Edge SE020695 80
 Black Edge Pot Hole SE020690 479
 Black Edge Shake Hole SE022689 479
 Black Hill 865662 50
 Black Keld 974709 80, 489
 Black Moss Pot 724982 270
 Black Reef Cave 774794 387
 Black Shiver landslide 738748 60
 Black Shiver Pot 737754 118, 376
 Blackside Pot 792885 201
 Blake Bank Moss Cave 725779 385
 Blayshaw Gill Pots SE099728 510
 Blea Gill Cave 692852 265
 Blea Moor 773826 47
 Blea Pots Lumb NY775051 272
 Blind Beck Cave 798730 369
 Blishmire House Caves 848723 468
 Blood Windypit SE565799 569
 Blowing Pot 888740 469
 Blubberhouses Moor SE130550 193
 Blue John Holes NY818038 524
 Bogg Hall Rising SE709865 564
 Boggarts Roaring Holes 728738 356
 Boggle Cave 871647 447
 Boggle Hole Gorge NY866026 112, 113, 115
 Bollihope Shield Cave NY998348 547
 Boreham Cave 925726 121, 122, 464, 466
 Borehole 677807 286
 Borrins Moor Cave 770752 201, 370
 Botcher Gill Sink NY937005 525
 Boulder Cave 667802 296
 Boundary Pot 679808 284
 Boucher Gill Cave 911778 456
 Bown Scar Cave 918721 463
 Boxhead Pot 671784 85, 120, 318
 Bracken Cave 916782 455
 Brackenbottom Pot 828723 425
 Brackenbottom Rising 817721 425
 Braithwaite Mine SE111861 26
 Braithwaite Wife Hole 743762 83, 378, 380
 Brants Gill Head 812729 134, 161, 163, 416, 418
 Brazen Gate Wood 981648 99
 Bridge Pot 728725 359
 Britannia Cave 671852 280
 Broadfield Caves 740864 262
 Broken Finger Pot 711774 342
 Broken Gill Cave 722832 266
 Brow Well SE007633 168
 Browgill Cave 800777 79, 433
 Brown Hill Pot 714784 340
 Bruff's Swallet SE086626 497
 Brunskill Pot 667794 320
 Bruntscar 738788 69
 Bruntscar Cave 738789 385
 Buckden Gavel Mine 956781 26, 219, 220, 221
 Buckden Pike 961788 48
 Bucket-on-the-Head 665835 278
 Buckhaw Brow Caves 798658 452
 Buckland's Windypit SE587828 567
 Bull Pot (Kingsdale) 702787 335
 Bull Pot of the Witches 662813 24, 129, 139, 294
 Bumbling Hole 669792 320
 Burnsall SE032613 11, 21
 Butter Haw Hill 996609 16
 Buttertubs 875961 79, 525
 Bycliffe Vein SE030678 477
 Bye George Pot 671796 300
 Caldbergh Gill Cave SE091853 522
- Calf Hole (Grassington) 964646 235, 242
 Calf Holes (Birkwith) 804776 433

CAVES AND KARST OF THE YORKSHIRE DALES

- Cam Fell *810805* 47
 Cam Houses *824821* 36
 Canal Cave (Nidderdale) *SE100735* 510
 Canal Cavern (Ribblesdale) *810767* 432
 Car Pot *755725* 393
 Caseker Gill *990743* 458
 Caseker Pasture *989747* 198
 Cassa Dub *762868* 75, 257
 Casterton Fell *668806* 281
 Casterton Pot *663816* 294
 Cat Hole *748700* 360
 Catamite Hole *705769* 342
 Cautley Crag *680970* 58
 Cave Ha *789662* 243, 244, 245, 451
 Cawden Burst *904629* 167, 444
 Caygill Scar *SE074840* 522
 Chambery Cave *711826* 266
 Chanterelle Pot *730745* 354
 Chapel Cave *881671* 242, 243, 246, 247, 447
 Chapel House borehole *843714* 460
 Chapel-le-Dale *725760* 6, 24, 34, 36, 58, 66, 69-72, 76, 122, 141, 143, 344, 374
 Chapel Lodge Cave *975662* 460
 Cherry Tree Hole *881704* 216, 220, 223, 471
 Chert Cave *734972* 269
 Christmas Pot *757727* 365
 Church Pot *SE099760* 502
 Churn Milk Hole *836718* 425
 Churns *666826* 280
 Clapdale *756714* 72, 77, 112
 Clapham Beck Head *754711* 73, 161, 406
 Clapham Bottoms *760720* 83
 Clapham Bottoms Pot *758721* 403
 Cliff Beck Head *874960* 525
 Cliff Force Cave *875960* 131, 525
 Cliff Wood Sinks *SE087739* 509
 Clint's Cave (Ingleborough) *753779* 379
 Clints Caves (Weardale) *NY843366* 544
 Clouds *NY738003* 95
 Coates' Cavern *857701* 422
 Cobble Rising Cave *756796* 384
 Cockpits *885710* 472
 Cogden Gill Low Level *SE049970* 529
 Colt Park Wood *774776* 102, 195, 196
 Comb Scar *892648* 65, 89
 Combe Scar *678875* 58
 Combs Cave *800701* 248, 369
 Committee Pot *667783* 317
 Conduit Spring Cave *769795* 387
 Conistone Dib *988678* 86, 88, 104, 478
 Conistone Dib Cave *991681* 235, 240
 Conistone Moor *SE005715*
 Conistone Old Pasture *993682* 104, 191, 196, 477
 Coppice Cave *802783* 433
 Copsy Gill North Cave *803773* 432
 Corky's Pot *752726* 393
 Corner Sink *675805* 286
 Coronation Pot *856700* 422
 Costa Beck *SE785843* 560
 Cote Gill Pot *933692* 473
 Cotter End *838927* 45
 Cotter End Pots *821933* 515
 Cotter Side Cave *813934* 515
 Cotterdale *835935* 34, 45, 515
 Cotterdale House Cave *831957* 515
 County Pot *675805* 119, 145, 158, 286
 Cove Hole (Ribblehead) *782794* 387
 Cove Hole (Wharfedale) *998649* 485
 Coverdale *SE050815* 44, 48, 520
 Coving Sike Pot *NY937304* 543
 Cow Close Pot *878739* 469
 Cow Pot *664808* 7, 289
 Cowgreen Reservoir *NY800300* 541
 Cowside Beck *905700* 35, 73, 78, 88, 111-115, 471
 Crackpot Cave *964954* 517, 527
 Cracoe *977600* 16, 148, 498
 Craftsman's Pot *702788* 335
 Crag Foot Mine *485735* 204
 Cragdale Head Rising *919819* 519
 Craven Fault System *690740* 24
 Craven Lowlands *740670* 48, 162, 168
 Craven Uplands *750750* 1, 33, 47, 162
 Crescent Pot *705766* 165, 342
 Cringlebarrow Wood *498754* 106
 Cross Pot (Newby Moss) *731724* 359
 Cross Pot (Pen-y-ghent) *812750* 25, 431
 Crucifixion Cave *826796* 453
 Crumbles *666802* 97
 Crummack Dale *775715* 12, 48, 77, 83
 Crystal Beck Pot *914748* 463
 Crystal-Bucket Cave System *667840* 277
 Crystal Cave *666841* 277
 Cuddy Gill Cave *766799* 387
 Cupcake *667784* 235, 236, 243, 317
 Daimler Hole *742795* 385
 Dale Barn Cave *711755* 88, 118, 145, 163, 164, 165, 174, 344
 Dale Head Pot *840718* 118, 138, 425
 Dalton Craggs *554768* 107
 Damocles Hole *NZ010048* 532
 Danby Level Cave *NY973035* 533
 Darnbrook *895700* 71, 73, 471
 Darnbrook Fell *885728* 48
 Darnbrook Pot *885710* 472
 Dead Dobbin Pot *665781* 315
 Dead Man's Cave *800670* 246
 Death's Head Hole *668791* 84, 220, 320
 Deepdale *725840* 35, 47, 52
 Deepdale Rising *894795* 453
 Dent Fault *660840* 24, 273
 Dentdale *740865* 35, 52, 53, 76, 257
 Devis Hole Mine Caves *SE052961* 27, 528
 Dib Scar *991662* 86, 104, 478
 Dib Well *SE051615* 497
 Diccan Pot *775757* 79, 130, 163, 371
 Dick Close *860680* 70, 423
 Disappointment Pot *750726* 396
 Dismal Hill Cave *805768* 432
 Dodd Fell *841846* 47, 518
 Dog Hole (Barbondale) *667840* 277
 Dog Hole (Morecambe Bay) *482802* 247
 Doublet Cave *793898* 267
 Douk Gill Cave *816725* 11, 86, 418
 Dover Gill Caves *757944* 271
 Dow Cave *983743* 118, 130, 164, 220, 223, 458
 Dowkabottom *952687* 5, 54, 187, 188, 226
 Dowkabottom Cave *951689* 223, 248, 249, 474
 Dowlass Moss *727730* 355
 Dowson Pot *SE710878* 561
 Dry Gill Cave (Chapel-le-Dale) *718759* 344
 Dry Gill Cave (Cotterdale) *822944* 515
 Dry Tarn *SE086598* 491
 Dub Cote Cave *819719* 12, 134, 418, 435
 Duerley Beck Caves *846843* 518
 Dunald Mill Hole *515676* 201
 Duncan Sike Cave *753839* 266
 Earl Pot *813747* 431
 Ease Gill *670804* 24, 35, 69, 83, 97, 123, 138, 154, 281
 Ease Gill Cave System *675805* 76, 139, 140, 142, 144, 149, 154, 174, 178, 201, 205, 220, 223
 Ease Gill Kirk Cave *660799* 249, 250
 East Gill Caves *NY897020* 524
 East Side Cave *889932* 517
 Ebbing and Flowing Well *804655* 164

CAVES AND KARST OF THE YORKSHIRE DALES

- Echo Pot *851703* 423
 Eden Sike Cave *782970* 271
 Eglin's Hole *SE093735* 509
 Elaphus Hole *748721* 362
 Elbolton Cave *SE007615* 149, 244, 245, 498
 Eller Beck Head Cave *NY992102* 541
 Ellerbeck Hole *734782* 385
 Eller Keld *749742* 379
 Elph Cleugh Cave *NY889342* 544
 Elpha Green Caves *NY846485* 552
 Engine Shed Rising *720752* 161
 Ewes Top *707763* 102
 Excalibur Pot *SE710878* 9, 561
 Faggergill Mine Caves *NZ990069* 534
- Fair Bottom Caves *800781* 434
 Fairy Cave *434826* 201
 Fairy Holes *NY943369* 131, 200, 201, 202, 545
 Falls Foot landslide *736745* 28, 60
 Farleton Fell *543803* 106, 107
 Farnham Cave *SE353603* 9
 Fault Pot *744763* 378
 Fawcett Moor Cave *843727* 468
 Featherbed Pot *750998* 269
 Feizor *790675* 94, 95
 Feizor Nick Caves *788683* 245
 Fell Beck *751728* 73
 Fell Close *773747* 83, 100
 Fell Close South Cave *773745* 373
 Fell End Clouds *736997* 108, 268
 Fells End Pots *NY808040* 272
 Fern Pot *731724* 359
 Fleet Moss *865835* 189
 Flood Cavern *746862* 264
 Flood Entrance Pot *751724* 397
 Fluted Hole *734724* 359
 Fog Cave *992720* 489
 Football Cave *767792* 387
 Footnaw's Hole *791753* 371
 Ford Cave *746791* 385
 Foredale *803700* 11
 Foss Gill Cave *948744* 458
 Foss Gill Pot *944742* 458
 Fossdale Beck Cave *864955* 515
 FOUL Pot *850701* 423
 Fountains Fell *863717* 12, 22, 70, 418
 Fouts Pot Pit *NY892311* 543
 Fox Hole (Wild Boar Fell) *734972* 269
 Foxholes (Birkwith) *821795* 434
 Foxholes (Clapdale) *756774* 406
 Fox's Level Cave *NY98035* 533
 Foxup Beck Cave *862766* 461
 Friarfold Vein *NY955020* 26
 Frog Pot *SE101756* 505
 Frostrow Fells *680905* 47
 Furness *270740* 9, 106
- Gait Barrows *483776* 99, 105
 Gale Garth Pot *662809* 295
 Gaping Gill Cave *751727* 10, 18, 56, 86, 126, 127, 136-139, 142, 143, 150, 172, 174, 200-202, 213, 220, 223, 389
 Garsdale *730900* 12, 35, 43, 268
 Garsdale Head *790920* 31, 34
 Gate Cote Scar *967717* 196
 Gatekirk Cave *745788* 385
 Gavel Pot *666791* 84, 122, 127, 139, 171, 174, 220, 320
 Gavel Rigg Pot *831722* 425
 Gayle Beck *783800* 77
 Gaze Gill *714793* 339
 Gemini Caves *845732* 468
 Giant's Grave *857734* 87
 Giant's Grave Caves *855731* 468
 Giggel Rav Pot *829722* 425
- Giggleswick Scar *803655* 24, 36, 58, 67, 244, 248, 451
 Gill Heads Mine *SE065620* 26, 27
 Gill House Pot *SE012681* 485
 Gill Rigg Caves *800787* 434
 Gillgarth Cave *774749* 373
 Gingling Hole *855701* 118, 418
 Gingling Sink *856702* 418
 God's Bridge (Chapel-le-Dale) *732764* 76, 122, 143, 381
 God's Bridge (Stainmore) *NY958126* 87
 God's Bridge River Cave *NY958126* 541
 Gorbeck Cave *865658* 447
 Gordale *913650* 20, 50, 55, 78, 89-91, 112, 115, 116
 Gordale Scar *915641* 4, 21, 90, 91, 112-114, 440, 443
 Gowerdale Windypits *SE518889* 568
 Goyden Pot *SE099761* 77, 118, 132, 155, 156, 164, 201, 502
 Grabbers Cave *739863* 263
 Gragareth *688794* 24, 84, 128, 305
 Grange Rigg Pot *755727* 365
 Granite Quarry Risings *720751* 163, 354
 Grassington Moor *SE020670* 22, 23, 25, 80
 Grassington Moor Cavern *SE026676* 485
 Great Asby Scar *NY650095* 9, 67, 97, 98, 108
 Great Close Mire *908664* 112, 116, 188, 194, 197
 Great Combe *704837* 58
 Great Coum *701835* 88
 Great Douk Cave *747770* 208, 379
 Great Knoutberry Hill *788872* 266
 Great Punchard Gill Cave *NY961044* 533
 Great Shack *SE090598* 491
 Great Sleddale Pots *827988* 524
 Great Whernside *SE001739* 198
 Green Hackeber Sink *804752* 434
 Green Laid Pot *700784* 335
 Green Ridge Cave *735752* 376
 Green Rigg Pot *736989* 270
 Green Slack Cave *774800* 387
 Greenhow Hill *SE105640* 16, 18, 22, 27, 137, 497
 Greensett Cave *748821* 385
 Greensett Crags *747817* 95
 Grenade Shaft *SE089636* 495
 Gretadale *NY950120* 541
 Grey Wife Hole *741722* 360
 Grinton Moor *SE050960* 197
 Grisedale *775935* 46, 47
 Gritstone Pot *728732* 356
 Grizedale Hole *872647* 447
 Grizedale Wood Level *483740* 204
 Grizedales *875645* 166
 Grollit *878644* 447
 Groove End Cave *974790* 519
 Growling Hole *712774* 25, 163, 342
 Guinevere's Slit *SE709872* 564
 Gunnerfleet Cave *757797* 384
 Gunnerside *951982* 26
 Guscott Pot *SE100758* 503
- Ha Mire *898665* 197
 Hackergill Cave *737862* 201, 263
 Hagg Gill Pot *893792* 453
 Hagg's Cave *827652* 450
 Hale Fell *502782* 106
 Hale Moss Cave *500775* 201, 214
 Hallam Moss Cave *738757* 376
 Halton Gill *880766* 167
 Hambleton Hills *SE530850* 566
 Hammer Pot *853697* 422
 Hanging Pot *669844* 276
 Hangman's Hole *770737* 367
 Hard Level Gill Cave *NY968008* 529
 Hardraw Force *869916* 5, 514
 Hardrawkin Pot *745768* 135, 378
 Harker Level *SE035941* 518
 Harnisha Burn Pot *NY986346* 547

CAVES AND KARST OF THE YORKSHIRE DALES

- Harry Hallam's Moss 736758 99
 Hartley Quarry Cave NY789081 553
 Hartleycleugh Quarry Cave NY804486 552
 Hawkswick Clowder 946687 471
 Haws Gill Wheel 745783 76, 154, 385
 Haycote Cave 691874 266, 280
 Haytime Hole 813739 431
 Hazel Bush Hill Hole NY990102 541
 Hazel Close Cave SE090736 510
 Hazel Grove Caves 499770 206
 Hazel Sike Sink 668824 280
 Hearne Beck Cave 851949 515
 Hearne Beck Pot 850950 515
 Heatheryburn Cave NY987412 546
 Heator Hole 832838 518
 Heights Cave 964646 235, 242
 Helbeck Scars NY770177 109
 Hell Gill 787969 86, 271, 513
 Hell Hole SE065622 25, 497
 Hellot Hole 662806 295
 Helmsley Windypit SE587828 567
 Henning Valley Cave 247764 201
 Hensler's Pot 752725 393
 Hermit's Cave 940759 457
 Heron Pot 714787 339
 Hesleden Bergh Cave 876749 461
 High Cup Nick NY745261 539
 High Douk Holes 745767 378
 High Force NY880283 539
 High Gill Caves 694863 265
 High Green Field 835795 36
 High Hull Pot 826745 425
 High Mark 932678 73, 103
 High Rigg Cave 796787 434
 High Swineber Pot 990698 489
 Highfolds 894676 74
 Hole in the Wall 915641 70, 114
 Holmepark Fell 542792 96, 106, 107
 Hope Level Cave NY990398 546
 Horseshoe Cave 841642 245
 Horton in Ribblesdale 807725 11, 23
 Hotton Hole NY659415 548
 Houtsay Quarry Caves NY618279 554
 How Stean Gorge SE093735 86, 112, 509
 How Stean Tunnel SE092734 509
 Howburn Cave NY710433 548
 Howe Gill 673807 281
 Howgill Fells 670970 11, 24, 42, 46
 How Gill Sink (Grassington) SE023683 479
 Howgill Sink (Ease Gill) 672804 298
 Hudgill Burn Mine Caverns NY750454 548, 551
 Hugh's Moss Cave 788901 267
 Huker Mire 958873 50
 Hull Pot 824746 25, 78, 81, 136, 425, 435
 Hunslet Hole 865688 434
 Hunt Pot 826740 78, 425, 429
 Hurnel Moss Pot 745724 24, 86, 362
 Hurtle Pot 738773 383
 Hut Pot 885740 469
 Hutton Roof Crags 557777 99, 106-108

 Ibbeth Peril Caves 741864 54, 174, 259
 Illusion Pot 700762 344
 Ingleborough 741746 1, 2, 22, 28, 45, 48, 54, 58, 60, 65-67, 81-83, 95, 101, 349, 389
 Ingleborough Cave 754711 5, 8, 32, 74, 138, 139, 150, 151, 171, 174, 178, 201, 202, 206, 210, 211, 214, 234, 235, 405
 Ingleton 695733 11
 Ireby Fell 670770 305
 Ireby Fell Cavern 673773 84, 137, 141, 150, 163, 172, 179, 311, 324
 It's a Cracker 671784 318
 Ivescar Cave 748798 249
 Jack Scar Cave NY948276 543

 Jackdaw Hole 809751 25, 431
 Jacob's Well NZ035361 547
 Janet's Foss 911633 112, 114
 Jean Pot 756725 393
 Jenga Pot SE712875 562
 Jingle Pot 738774 383
 Jinglepot Hole NZ009086 541
 Jingling Cave 699784 81, 333
 Jingling Pot 699784 78, 151, 335
 Jingling Sike Cave 787966 271
 Joint Hole 735766 122, 137, 382
 Jubilee Cave 837655 234, 239, 241, 243, 449
 Juniper Gulf 765733 19, 120, 130, 367

 Kail Pot 687769 332
 Katnot Cave 780797 77, 387
 Keekham Beck Head Pot NY814236 543
 Kelco Caves 810646 234, 243, 244, 245, 249, 451
 Keld Bank Sink 754773 379
 Keld Beck Cave 776870 267
 Keld Farm Cave SE103638 497
 Keld Head (Kingsdale) 696766 76, 77, 121, 122, 128, 134, 143, 161, 164, 165, 343, 347
 Keld Head (Pickering) SE794830 560
 Keld Head (Ravenstonedale) NY738021 268
 Keldheads Cave SE076916 518
 Kentucky Cave 992809 519
 Kettlewell 970723 6, 112, 167
 Key Scar NY777165 109
 Kilnsey Crag 974683 11, 20, 112, 167
 King Pot 708774 129, 341, 347
 Kingsdale 700770 16, 24, 35, 47, 52, 53, 69, 76, 95, 141, 164, 165, 307, 331
 Kingsdale Cave System 698774 76, 118, 123, 128, 133, 150, 165, 178, 307, 331
 Kingsdale Head Cave 708795 338
 Kinsey Cave 804657 55, 234, 235, 236, 239-244, 247, 249, 451
 Kirk Bank Cave (Dentdale) 731870 264
 Kirk Bank Cave (Wharfedale) 929775 457
 Kirk Gill Cave and Pot 924778 457
 Kirk Pot 662802 300
 Kirkby Fell 874636 57
 Kirkby Lonsdale 611787 45, 48
 Kirkdale Cave SE678856 10, 201, 227, 564
 Kirkham Gorge SE740760 559
 Kirkhead Cave 391756 249
 Kisdon Cave NY899011 525
 Kisdon Hill 900998 523
 Knacker Trapper Hole 745762 378
 Knaresborough SE350570 9
 Knock Fell Caverns NY720307 131, 132, 156, 158, 554
 Knowe Fell 870677 443
 Kuling Hole 874638 447

 Lady Blue's Underwater Fantasy 718973 270
 Lancaster Hole 664807 7, 18, 125, 126, 138-140, 143, 170, 172, 174, 176, 177, 181-185, 233, 289
 Lancelot Clark Storth 547775 107
 Langcliffe Pot 995710 22, 118, 132, 164, 487
 Langcliffe Scar 847653 16
 Langstroth Cave 902789 455
 Langstroth Pot 896788 455
 Langstrothdale 905790 47, 48, 112, 453
 Lante Shop Cave 839770 434
 Larch Tree Hole 829719 425
 Large Pot 682768 307
 Leck Beck Head 660800 76, 122, 158, 161, 289, 300, 323
 Leck Fell 667790 85, 127, 129, 143, 158, 298, 305
 Light Water Spring 727758 161, 354
 Limekiln Pot 818734 427
 Limley Pot SE100760 502
 Ling Gill 802786 196, 434
 Link Pot 668803 221-224, 296

- Little Combe 706846 47
 Little Dale 760815 35
 Little Douk Pot 747769 379
 Little Hull Pot 821744 427
 Littlewood Cave 866766 461
 Litton Fosse 903738 167, 463
 Litton Risings 920727 461
 Littondale 945710 22, 29, 52, 57, 76, 77, 88, 112, 194, 461
 Lizard Pot 761727 367
 Lockey Gill 856733 468
 Lofthouse Pot SE100734 510
 Lofthouse SE101735 23
 Logan Hole 856688 423
 Long Churn Caves 773757 73, 119, 150, 201, 214, 370
 Long Drop Cave 669792 320
 Long Kin East Pot 762730 25, 68, 96, 163, 367
 Long Kin West 731724 118, 358
 Loop Cave 903700 216
 Loose Pot 728732 356
 Lord's (Tot) Hole 853632 451
 Lord's Top Hole 706772 342
 Losers' Pot 827736 427
 Lost John's Cave 670786 18, 74, 120, 124, 125, 129, 133, 150, 174, 178, 220, 317, 328, 329
 Lost Pool Sink NY989102 541
 Lost Pot 671784 318
 Lovergill Caves 882961 527
 Low Birkwith Cave 798768 432
 Low Douk Cave 677768 311
 Low Eglin's Hole SE094734 509
 Lower Hardgill Pot 720732 355
 Lunehead Mine caves NY846205 543
 Lynnkirk Cave NZ006392 201, 546

 Magician's Hole 825672 450
 Magnetometer Pot 849697 163, 424, 435
 Maize Beck Caves NY749269 543
 Malham Cove 897641 4, 20, 21, 25, 50, 51, 54, 77, 89-91, 103, 166, 439, 443
 Malham Cove Rising 897641 73, 91, 121, 150, 174, 445
 Malham Dale 900625 76, 77
 Malham High Country 920680 23, 33, 67, 71, 73, 81-83, 95, 103, 104, 140, 144, 157
 Malham Tarn 893667 4, 32, 51, 56, 69, 112, 114, 145, 159, 188, 189, 192, 197
 Malham Tarn Pot 893653 166, 446
 Malhamdale 900630 77
 Mallerder Cave 885744 167, 471
 Mallerstang 990780 34, 43, 57, 86, 271
 Manchester Hole SE100764 77, 132, 168, 500
 Marble Pot 759730 85, 363
 Marble Sink 759730 363
 Marble Steps Pot 680771 129, 153, 308
 Marfield SE222820 49
 Masham SE224808 49
 Masongill 664754 52
 Mastiles 930660 73
 Maze Holes 899915 517
 Meal Bank 697735 18, 74, 112
 Meregill Hole 740757 25, 118, 376, 380
 Meregill Skit 734765 381
 Middle Scar Cave 770796 386
 Middle Scar Holes 770796 387
 Middle Washfold Caves 747764 155, 189, 379
 Middleton Fell 664855 11
 Midge Hole 737770 383
 Mill Beck Sink Cave 701870 265
 Mistral 667803 298
 Mohole 686769 129, 307
 Moking Hurth NY868310 543
 Moking Pot NY868312 543
 Mongo Gill Hole SE092635 27, 137, 493
 Morecambe Bay karst 470770 104, 105

 Moses Well 751702 360
 Moss Beck Rising 964693 161, 168
 Moss House Mine 480738 204, 205
 Mossdale Caverns SE016697 22, 80, 118, 121, 132, 142, 155, 481
 Motley Pot 750726 396
 Moughton 790715 66, 68, 82, 101, 369
 Moughton Fell Fissure 795725 234
 Mousegill Cave NY853119 553
 Mr Sparkler's Glory Hole SE536864 568
 Murton Cave SE528883 568
 Mustard Pot 902732 463

 Naked Dale Gill Cave 896849 519
 Nape Well Cave SE068616 497
 Nappa Scars 769697 12, 112
 Needlehouse Gill Cave 740973 269
 Nether Hesleden 887746 167
 Nettle Pot 693873 265
 New Goyden Pot SE101754 132, 133, 504
 New Houses Rising 8036739 156, 430
 New Pasture Cave 851705 422
 New Year Pot 858694 423
 Newberry Scar Pots NY938300 543
 Newbiggin Crags 550795 107
 Newby Moss 732723 68, 84, 358
 Newby Moss Cave 743723 361
 Newby Moss Pot 738723 85, 174, 360
 Nick Pot 770737 130, 367
 Nidd Heads SE104731 77, 133, 156, 505
 Nidderdale SE100750 23, 76, 77, 80, 499
 Nippikin Pot 667801 298
 Nirvana 748863 263
 Noddle End Windypit SE526885 568
 Norber 770700 48, 54, 74, 75, 95, 172, 369
 North End Pot 683765 235, 236, 245, 246, 247, 308
 North Fair Bottom Cave 803783 433
 North Pot SE088637 496
 North York Moors SE600900 557
 Notts Pot 671778 18, 85, 127, 129, 150, 151, 220, 313, 327

 O.B.J. Hole 751724 397
 October Hole 779758 373
 Oddmire Pot 994713 487
 Ofapi Pot SE869850 569
 Old Gang Mine NY953013 27
 Old Ing Cave 807768 432
 Oozle Hole 994727 459
 Orton Fells NY670100 108, 110
 Otters Cave SE080846 522
 Oughtershaw Moss 860820 47
 Out Sleets Beck Pot 868737 468, 470

 P5 758726 365
 P101b 739756 376
 Paradise Cave 746787 385
 Park Scar Cave 911856 519
 Parson's Pulpit 918688 73, 82, 441, 473
 Pasture Gill Pot 905793 135, 455
 Pay Sank 758726 365
 Pegleg Pot 663802 300
 Pendleton Pipe SE123640 497
 Penhill SE044864 57
 Penny Farm Cave 698931 268
 Pen-y-ghent 838734 2, 22, 36, 87, 88, 191, 425
 Pen-y-ghent Gill 865740 18, 22, 23, 35, 112, 467
 Penyghent Gill Main Sink 873742 471
 Penyghent Long Churn 811753 431
 Penyghent Pot 829733 150, 214, 428, 435
 Penyghent Side Cave 837743 434
 Perilous Pot 671779
 Pete's Pot 915640 206
 Peterson Pot 667799 299
 Pikedaw Calamine Caverns 875640 26, 27, 128, 142, 201, 447

CAVES AND KARST OF THE YORKSHIRE DALES

- Pikedaw Hill 883638 441
 Pillar Holes 733724 359
 Pinchin Pot 788897 267
 Pippikin Pot 667800 1, 169, 174, 185, 298
 Pock Stones Moor SE066620 23
 Polystyrene Head Cave 850800 453
 Pool Bank Cave 433877 201, 203
 Pool Rising NY831163 553
 Pool Sink 677807 285
 Popples 730861 76, 264
 Porthole 666832 280
 Potts Beck Pot 902750 463
 Poverty Gill Cave 816798 434
 Preacher's Cave NY732004 268
 Preston Spring Wood SE064915 196
 Priorsdale Cave NY778411 548
 Providence Pot 992728 460
 Psilomelane Pot 838719 425
 Puffball Cave 888746 471

 Quaking Pot 731740

 Rain Pot 991722 478
 Rakes 565782 99, 107, 108
 Rat Hole 751727 390
 Raven Scar Cave 729755 235, 241, 242, 246
 Rawdin Hole 860630 451
 Rawthey Cave 718973 235, 236, 245, 247, 249, 270
 Rawthey valley 690950 35, 269
 Raydale 910860 11, 12, 13, 519
 Raygill Fissure 941452 228, 229, 230, 235
 Red Dog Pot 878754 461
 Red Moss Pot 810758 79, 135, 432
 Redmire Pot 933766 131, 457
 Resurrection Rising 858800 453
 Ribblesdale 800740 12, 35, 43-48, 52, 67, 71, 76-79, 84, 140, 141
 Ribblesdale Cave 777797 387
 Ribblesdale 800740 12, 35, 43-48, 52, 67, 71, 76-79, 84, 140, 141
 Rift Pot (Allotment) 761729 130, 367
 Rift Pot (Gragareth) 679769 220, 307, 324, 326
 Rigg Pot 992716 489
 Ringle Mill Cave 794737 163, 369
 Ripon SE310710 9
 River Pot 745787 385
 Roaring Hole 742763 376
 Robin Hood's Cave 978657 460
 Robin's Dub Cave 724838 266
 Robinsons' Pot 899706 216, 472
 Rocky Pot 858694 423
 Roger Kirk Cave 761796 386
 Rooting Gill Head 817903 267
 Rosebay Pot 732724 359
 Rough Close Sink 861689 423
 Rough Sike Cave NY756328 543
 Roughton Keld NY965071 533
 Rowan Tree Rift 789882 267
 Rowantree Cave 938755 458
 Rowantree Mea Cave 866978 527
 Rowell Gill Risings 675855 280
 Rowten Caves 699780 333, 347
 Rowten Pot 698780 79, 129, 130, 201, 220, 333
 Rumbling Hole 671791 222, 319
 Runscar Caves 765797 387
 Rye Loaf Hill 834634 451
 Ryedale SE580830 566

 Sally Grain Cave NY801291 544
 Sargill Sinks 881932 517
 Scales Moor 720770 66, 74, 75, 80, 93, 95, 100, 102, 157
 Scanty Lardos Pot 878754 461
 Scar Close 748774 94, 98, 102, 188, 190, 196
 Scar Close Cave 752772 379
 Scar Top Cave 765798 387

 Scars Hole 915779 456
 Scoska Cave 915724 112, 150, 201, 203, 208, 215, 463
 Scots Hole Pots 815936 515
 Scafton Pot SE073836 136, 520, 521
 Secret Dig SE711878 562
 Sell Gill Holes 811743 136, 156, 201, 430
 Selside Pot 774758 373
 Semer Water 920873 50
 Settle 820636 13, 43, 112, 196, 437
 Sewell's Cave 785666 234, 235, 240, 241, 243-248
 Shale Sink 666828 276
 Shatter Pot 860692 423
 Sheepfold Pot 690769 332
 Shell Cave 888739 469
 Shep Pot 670780 139
 Shivery Gill Pot 868936 517
 Shockle Shaft SE092635 494
 Short Drop Cave 670789 18, 126, 127, 223, 320
 Short Gill Cave 670847 279
 Short Gill Pot 670847 279
 Shrapnel Pot 826740 427
 Shrinking Pot 786892 267
 Shuttleworth Pot 662798 138, 159, 236, 237, 245, 323
 Sig Pot 672851 279
 Sike Gill Rising 971675 161, 168, 460
 Silver Jubilee Pot NY710316 555
 Silverband Mine Caverns NY702317 555
 Silverband Pot NY704322 556
 Silverdale (Morecambe Bay) 463746 105
 Silverdale (Pen-y-ghent) 840705 12
 Silverdale borehole 843714 414
 Silverdale Gill Pot 839704 424
 Simpson's Pot 696779 129, 143, 171, 333
 Skell Gill Caves 818738 427
 Skipton 990516 49
 Skirfare River 945710 77, 461
 Skirwith Cave 709738 163, 355
 Slanting Cave 705792 338
 Slape Gill East Cave SE002779 520
 Slasher Hole 764731 367
 Slets Gill Cave 959692 10, 112, 127, 134, 142, 150, 168, 474
 Slip Gill Windypit SE575835 567
 Smearsett Cave 800678 248, 452
 Smeaton Pot SE499172 9
 Smegmire Pot 933764 457
 Smelt Mill Sink 882669 166, 442
 Smeltpill Beck Cave NY849146 120, 552
 Smithy Level Caves 986958 528
 Snaizeholme 830860 34
 Snatcher Pot 865742 468
 Snoon's Hole 968742 469
 Snorkel Cave 876740 469
 Snowden Gill Rising 930955 527
 Snuffit Pots 876761 461
 Sod Hole Gill Caves 868937 517
 Sodoff Pot 667842 278
 South Bank Pot 860630 451
 Southerscales 744766 45, 99, 101, 102, 196, 374
 Southerscales Pot 750768 148, 379
 Sowan Burn Cave NY998380 546
 Spectacle Pot 711777 25, 163, 341
 Spittle Croft Cave 900741 463
 Spring Trap Cave 975705 490
 Springs Wood Level 958722 205, 216
 Stainforth 822673 112, 114
 Stainforth Cave 825667 450
 Stainforth Scar Cave 824668 450
 Stainmore NY880125 1, 13, 34, 42, 97, 541
 Stake Beck Caves NY747299 556
 Stalling Busk Cave 916860 519
 Starbotton End Mine 958722 205, 216
 Starting Handle Hole 669786 319

- Stebden Hill *SE002607* 16
 Stenkrith Park Caves *NY773076* 553
 Stennerskeugh Clouds *NY743007* 108, 268
 Stone Rigg Cave *682866* 280
 Stone Root Cave *NY911010* 525
 Stonelands Cave *919732* 147, 464
 Stonygill Head Cave *NY933267* 543
 Stot Rakes Cave *817741* 427
 Strangle Pot *860691* 118, 423
 Strans Gill Pot *916788* 135, 143, 456
 Strawberry Pot (Ingleborough) *748722* 362
 Strawberry Pot (Wharfedale) *947734* 458
 Stream Passage Pot *748725* 396
 Stump Cross Caverns *SE089635* 5, 27, 39, 54, 118, 174, 176, 201, 203, 215, 231, 232, 233, 235, 493
 Sulber Nick *785733* 83, 101
 Sulber Pot *771737* 367
 Summer Lodge East Level caves *966952* 528
 Summit Cave *779961* 271
 Sunset Hole *742759* 378
 Swaledale *950980* 22, 24, 26, 112, 130, 197, 523
 Swan Dyke Pot *870743* 469
 Swarth Fell *755967* 58
 Swarthgill Hole *SE012701* 489
 Sweetwater Hole *740759* 376
 Swindalehead Cave *NY815188* 553
 Swinden Quarry Cave *976611* 498
 Swindon Hole *675805* 286
 Swinnergill Caves *NY911012* 525
 Swinsto Hole *694775* 118, 125, 128, 129, 150, 157, 162, 333
 Swinsto South *693775* 332
 Sylvester Pot *673806* 287

 Tabular Hills *SE610870* 560
 Tatham Wife Hole *731747* 25, 130, 354, 355
 Teesdale *NY930260* 541
 Thackthwaite Beck Cave *987911* 517
 Thaw Head Cave *708757* 236, 243-246
 Thieves Moss *777731* 68, 112
 Thistle Cave *764797* 387
 Thorney Pot *695773* 332
 Thorns Dub Hole *777793* 387
 Thorns Gill Cave *778795* 77, 387
 Thornton Force *695753* 11, 12, 76, 77
 Thornton Mire *951873* 50
 Threaplans Cave *987605* 498
 Three Counties Cave System *665785* 1, 7, 8, 117, 118, 142, 158
 Thrope Pot *SE101754* 504
 Throstle's Nest *981688* 112, 115
 Thunder Pot *993716* 487
 Thwaite Scars *762710* 101
 Tiddeman's Pot *760723* 399
 Timpony Joint *SE081633* 496
 Tom Hunter's Parlour *SE074840* 522
 Tom Taylor's Cave *SE093735* 509
 Top Sink *680811* 76, 284
 Top Tip Pot *661813* 295
 Town Beck Pot *985598* 498
 Trapdoor Pot *727727* 356
 Trident Rising *871742* 469
 Trollers Gill *SE068618* 26, 27, 201, 497
 Trough Scars Caves *NY964119* 541
 Trow Gill *755717* 50, 86, 87
 Trowbarrow *481757* 94, 106
 Tub Hole *732861* 264
 T'une Mouth *SE707867* 565
 Turbary Pot *695775* 333
 Turf Belay Pot *864694* 434
 Turf Pits Mine *SE027676* 27

 Turn Dub *797749* 78, 164, 371, 431
 Tutman's Hole *NY680460* 548
 Twang Cave *738863* 263
 Twin Bottom Scar Cave *877643* 201
 Twinkle Cave *845654* 450
 Twisleton Scars *720765* 66, 94, 102

 Uldale House Rising *729968* 269
 Underlaid Wood *483796* 99, 106
 Upper Hackergill Cave *740861* 264
 Upper Hesleden Cave 2 *864739* 468

 Valley Entrance *698774* 174, 336
 Vein Pot *768734* 367
 Vesper Pot *712776* 341
 Victoria Cave *839650* 31, 38, 54, 55, 58, 70, 112, 138, 141, 170-178, 186, 225-228, 230, 234-237, 239-242, 246-249, 448
 Voldemort Hole *670781* 117, 316
 Walden Beck Cave *993812* 519

 Walden valley *SE010830* 35, 519
 Warton Crag *492728* 54, 55
 Washfold Pot *774765*
 Water Sinks *666894* 159, 442
 Water String *SE018963* 528
 Watlowes *896644* 50, 77, 89-91, 440
 Weardale *NY920380* 544
 Weathercote Cave *739775* 383
 Wensleydale *900900* 34, 42, 44-53, 56, 112, 130, 511
 West Burton Mine *SE022867* 26
 West Kingsdale Cave System *698774* 332
 West Pasture Cave *963813* 519
 West Side Pot *887933* 517
 West Wood *SE065899* 196
 Wharfedale *950745* 4, 6, 16, 34, 35, 49, 52, 66, 71, 76, 77, 104, 112, 141, 167, 187, 193, 457
 Whernside *738814* 22, 54, 57, 58, 95
 Whipperston Hill Pot *882796* 453
 Whirley Gill Pot *972935* 517
 Whitbarrow *441870* 106
 Whitcliffe Scar Caves *NZ131020* 528
 White Keld *975707* 489
 White Scar Cave *712745* 5, 12, 74, 79, 118, 124, 125, 127, 134, 137, 138, 143, 159-163, 167, 173, 174, 178, 185, 186, 201, 203, 206, 208, 211, 215, 350
 Whitestone Cliff *SE507835* 569
 Widdale *830880* 45, 47, 53
 Widdale Fell *815890* 53, 267
 Wild Boar Fell *758988* 42, 57, 108, 268
 Windegg Mine Caverns *NZ012052* 532
 Windypits *SE582829* 10, 222
 Winshaw Gill Cave *777803* 386
 Winter Cave *753802* 385
 Winterscales Beck *745790* 76, 384
 Wise Pot *871662* 447
 Witches Cave *660799* 321
 Wizard's Chasm *840650* 27, 450
 Wold End Pot *744846* 266
 Wonderland Cave *669850* 280
 Wretched Rabbit Entrance *676806* 286

 Y Pot *731723* 359
 Yad Moss Cave *NY783358* 543
 Yarnbury *SE015658* 27
 Yew Cogar Cave *908700* 112, 472
 Yockenthwaite Cave *898794* 455
 Yockenthwaite Pot *901796* 455
 Yordas Cave *705791* 140, 201, 338
 Yorkshire Yeti Cave *74-72-* 379



Caves and Karst of the Yorkshire Dales presents an overview of all aspects of the great cave systems and spectacular karst landforms in the limestone terrains of the Yorkshire Dales.

Nineteen authors, all experts in their own fields, have produced authoritative and up-to-date texts, which have been drawn together by two editors, who each has extensive experience of the Dales both above and below ground. This book is Volume One of a pair, and contains all the overview chapters. A companion Volume Two contains chapters describing all the larger and more important cave systems in each dale and fell across the region's karst.

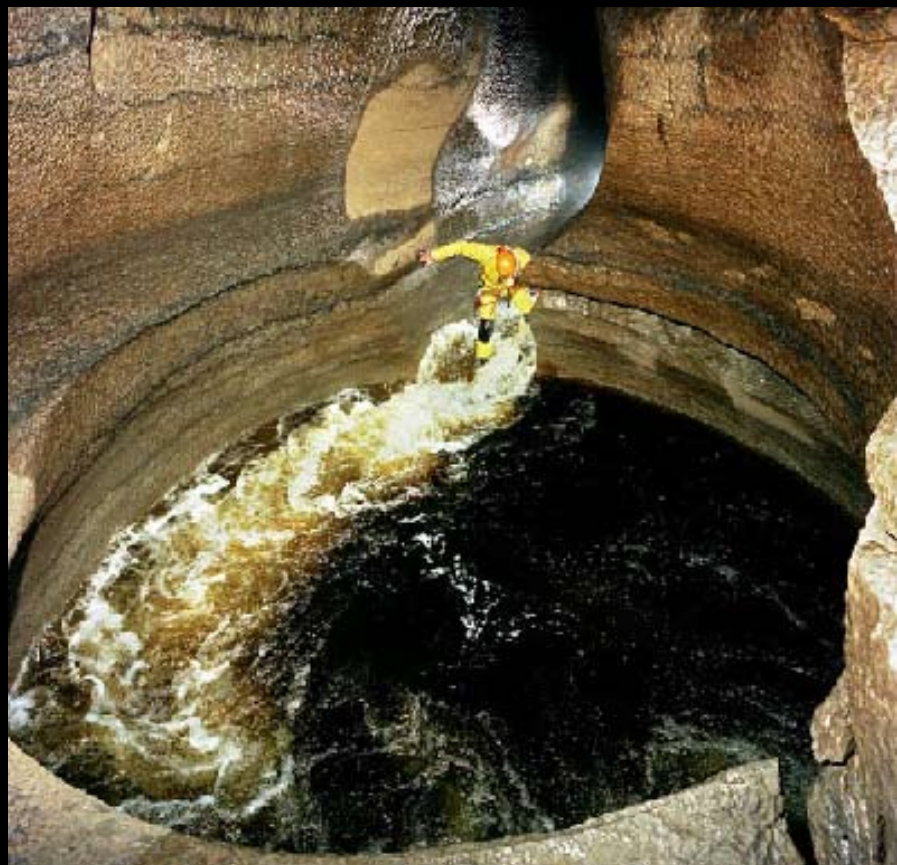
The chapters

Yorkshire Dales
Limestone geology
Quaternary glaciation
Karst geomorphology
Limestone pavements
Travertines
Cave geomorphology
Cave development
Karst hydrogeology
Cave chronology
Palaeoclimates
Holocene environment
Subterranean biology
Cave bats
Cave palaeontology
Cave archaeology

264 pages

165 maps and graphics

354 photographs



A publication from the
British Cave Research Association





Caves and Karst of the Yorkshire Dales presents an overview of all aspects of the great cave systems and spectacular karst landforms in the limestone terrains of the Yorkshire Dales.

Thirty-one authors, all experts in their fields, have produced authoritative and up-to-date texts, which have been drawn together by editors with extensive experience of the Dales both above and below ground. This book is Volume Two of a pair, and describes the major caves within each dale and fell across the region's limestone karst. A companion Volume One contains chapters that provide overviews of each aspect of the karst sciences.

The caves of -
Dentdale
Barbondale
Ease Gill
Leck and Ireby Fells
Kingsdale
Ingleborough
Gaping Gill
Pen-y-ghent and
Fountains Fell
Malham and Settle
Wharfedale
Grassington Moor
Greenhow to Cracoe
Nidderdale
Wensleydale
Swaledale
Northern Pennines
North York Moors

328 pages
141 maps and graphics
627 photographs



A publication from the
British Cave Research Association

