

Gudenus Cave

The Earliest Humans of Austria

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Front cover: Amygdaloidal rolled hand axe of yellow jaspilite. Original 1963 field sketch.
Back cover: Perforated wolf tooth of the Gudenus Cave Magdalenian.

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Contents

List of Figures	iii
List of Tables.....	vi
Preface	vii
Acknowledgments	ix
Chapter 1	
History of Gudenus Cave	1
1.1. The pre-1962 investigations.....	1
1.2. The post-1962 investigations	20
1.3. The scientific status of Gudenus Cave in 1962	23
Chapter 2	
Gudenus Cave and its environment.....	26
2.1. Geography and geology	26
2.2. The cave.....	29
2.3. Past and present environmental settings	32
2.4. The speleoclimate of Gudenus Cave.....	36
2.5. Hydrology and sedimentation	42
Chapter 3	
Archaeology and palaeontology of Gudenus Cave: the data	47
3.1. The 1963 to 1966 salvage excavations	47
3.2. The new lithic implements	60
3.2.1. The Occupation Layer I stone tools	60
3.2.2. The Occupation Layer II stone tool.....	64
3.2.3. The Occupation Layer III stone tools.....	65
3.2.4. The Occupation Layer IV stone tools	68
3.3. The palaeoart.....	71
3.4. The palaeontology of the cave.....	74
3.4.1. Bone fragmentation study of the post-1962 bone remains	78
3.4.2. Summary – faunal remains.....	78
Chapter 4	
Sediments of Gudenus Cave	80
4.1. The sedimentary analyses.....	80
4.1.1. Methods of sediment analyses	81
4.1.2. Description of the sediment samples	82
4.2. Reconstructing the sediment stratigraphy	91
4.3. The pollen and spore analysis	94
4.4. The carbonate diffraction study.....	103
Chapter 5	
Interpretation of Gudenus Cave data	107
5.1. Recapping.....	107
5.2. The new interpretations.....	109
5.2.1. The sediment stratigraphy	109
5.2.2. The climatic and environmental sequence	110
5.2.3. The hominin occupations	115
5.2.4. The history of Gudenus Cave	123

Chapter 6	
The Palaeolithic context of Gudenus Cave	129
6.1. The Lower Austrian context.....	129
6.2. The broader Austrian context	132
6.3. The central European context	147
6.4. The global context	150
6.5. A synopsis	152
References	155
Index	169

List of Figures

Figure 1. Coat of arms of the Gudenus family.....	1
Figure 2. Plan view of Gudenus Cave and its proximity to the Kleine Krems on the left, and section from the creek to the main cave entrance, looking north.....	2
Figure 3. Plan of the Gudenus Cave.....	3
Figure 4. Prof. Jan Nepomuk Woldřich.....	3
Figure 5. Map of the lower valley of the Kleine Krems, from Hartenstein to the Kremsszwinkel, indicating the distribution of caves and rockshelters in the area.....	4
Figure 6. Artefacts from the Gudenus Cave.....	6
Figure 7. Hugo Obermaier and Henri Breuil.....	7
Figure 8. 'Magdalenian' blade tools from Gudenus Cave.....	7
Figure 9. 'Magdalenian' lithics from Gudenus Cave.....	8
Figure 10. 'Magdalenian' bone and antler tools from Gudenus Cave.....	9
Figure 11. Rolled-off recording of the engraved markings on the presumed needle case from Gudenus Cave.....	9
Figure 12. Three of the bone fragments that have been worn intensively by sand.....	10
Figure 13. Three hand axes worn by sediment.....	11
Figure 14. Ten amorphous lithics worn by sediment.....	12
Figure 15. Eight unifacial stone tools worn by sediment.....	13
Figure 16. Six hand axes unworn by sediment.....	13
Figure 17. Six lithics unworn by sediment.....	14
Figure 18. The 'undersides' of the same six lithics as shown in Figure 17.....	15
Figure 19. Ten stone implements made from amorphous flakes not worn by sediment.....	16
Figure 20. Nine lithics not worn by sediment.....	17
Figure 21. Thirteen knapped flakes of rock crystal.....	17
Figure 22. The location of the Waldviertel within Lower Austria; and the location of Gudenus Cave.....	26
Figure 23. Site plan of Burg Hartenstein.....	27
Figure 24. The main and southern entrances of Gudenus Cave below one of the ruined towers of Burg Hartenstein.....	28
Figure 25. View of the northern passage of Gudenus Cave, with Blocks 1 and 2 visible, and the emptied vertical crevice to their left.....	28
Figure 26. Geology in the vicinity of Gudenus Cave.....	29
Figure 27. North-eastern wall of Gudenus Cave after removal of Blocks 3 and 4, Block 2 remains on the left.....	29
Figure 28. The division of Gudenus Cave into six descriptive zones.....	30
Figure 29. Speleological map of Gudenus Cave by Hartman and Hartman (1985).....	30
Figure 30. Map of Gudenus Cave for the documentation of its archaeology, made for the present study.....	30
Figure 31. Schematic section illustrating how the vertical crevice was formed before the Riss glacial.....	32
Figure 32. Mean annual temperatures 1971–2000 of occupied places in Austria as a function of elevation.....	35
Figure 33. Thermal environment of Gudenus Cave, as indicated by the study results in 1981.....	39
Figure 34. The seven test locations for smoke dispersal in Gudenus Cave.....	40
Figure 35. The catchment areas of the Große Krems, the Kleine Krems and the Krems river upstream of Imbach in km ² . Also shown are the four zones of average annual precipitation that apply across the combined catchments.....	43
Figure 36. Original 1963 field sketch depicting the morphology of the recess behind Blocks 1 and 2; at that time, it was anticipated that the two occupation horizons would be of Breuil and Obermaier's two proposed strata.....	48
Figure 37. NW-SE section of the sediment excavated in the recess behind Blocks 1 and 2: the first stratigraphic depiction ever secured from Gudenus Cave, drawn on-site in October 1963.....	48
Figure 38. Chert flake U/23 in situ, upper occupation layer [III], looking SE and showing the recess behind Block 2. Block 1 is visible in the foreground, the foot of the cave wall on the left; 7 July 1963.....	49
Figure 39. Upper occupation layer [III], NW part: the recess behind Blocks 1 and 2. Osteal and lithic remains are numbered.....	49
Figure 40. Lower occupation layer [II], NW part: the recess behind Blocks 1 and 2. Remains are numbered.....	50
Figure 41. Section AA through the recess behind Block 1 and 2, looking SE, referring to Figures 39 and 40.....	51
Figure 42. The Crevice was formed as Blocks 3 and 4 slid down along the steep fault slope until they came to rest on the sediment.....	51
Figure 43. Upper occupation layer [III], SE part: the recess behind Blocks 3 and 4.....	52

Figure 44. Part of the upper occupation layer in the SE Crevice, visible across the upper part of the photograph, and cleft separating Blocks 3 (left) and 1, with several finds <i>in situ</i>	53
Figure 45. Lower occupation layer [II], SE part: the recess behind Blocks 3 and 4.....	55
Figure 46. Lowest occupation layer [I]: the recess behind Blocks 3 and 4.....	56
Figure 47. Section of the sediment column in the Crevice concealed by Blocks 3 and 4, roughly NW to SE, looking NE. Occupation Layers I, II and III are shown, as are the collection sites of sediment samples DS-1 to DS-7.	57
Figure 48. Section A of the sediment column in the Crevice concealed by Blocks 3 and 4, roughly SW to NE, looking NW.	58
Figure 49. Upper part of Section A, above Benchmark in Figure 48, roughly SW to NE, looking NW.	58
Figure 50. Section through Bayer's Niche, showing its state in 1976.	59
Figure 51. Stone implement U/109, Occupation Layer I.....	61
Figure 52. Stone implement U/113, Occupation Layer I.....	61
Figure 53. Stone implement U/114, Occupation Layer I.....	62
Figure 54. Stone implement U/118, Occupation Layer I.....	63
Figure 55. Stone implement U/124, Occupation Layer I.....	64
Figure 56. Stone implement U/26, Occupation Layer II.....	64
Figure 57. Stone implement U/20, Occupation Layer III.	65
Figure 58. Stone implement U/23, Occupation Layer III.....	66
Figure 59. Stone implement U/35, Occupation Layer III.....	67
Figure 60. Stone implement U/37, Occupation Layer III.....	68
Figure 61. Stone implement U/29, Occupation Layer IV.....	69
Figure 62. Stone implement U/143, Occupation Layer IV.....	70
Figure 63. Stone implement U/143, Occupation Layer IV.....	70
Figure 64. The bâton percé from Gudenus Cave.....	72
Figure 65. Perforated teeth of fox, red deer and wolf of the Gudenus Cave Magdalenian.....	73
Figure 66. Bone whistle, probably produced with a metal tool.....	73
Figure 67. Sample DS-8, cumulative grain size distribution curve.....	83
Figure 68. Fine fractions of samples DS-8 and DS-9, compared to those of the present river sediment, DS-10.....	83
Figure 69. Sample DS-9, cumulative grain size distribution curve.....	84
Figure 70. Sample DS-1, cumulative grain size distribution curve.....	85
Figure 71. Fine fractions of samples DS-1, DS-2 and DS-3, compared to those of the present river sediment, DS-10.....	85
Figure 72. Sample DS-2, cumulative grain size distribution curve.....	86
Figure 73. Sample DS-3, cumulative grain size distribution curve.....	87
Figure 74. Sample DS-6, cumulative grain size distribution curve.....	88
Figure 75. Fine fractions of samples DS-6, DS-7 and DS-5, compared to those of the present river sediment, DS-10.....	88
Figure 76. Sample DS-7, cumulative grain size distribution curve.....	89
Figure 77. Sample DS-5, cumulative grain size distribution curve.....	90
Figure 78. Sample DS-10, cumulative grain size distribution curve.....	91
Figure 79. The stratigraphical models by Hacker (1884); Woldřich (1893); Obermaier and Breuil (1908); and Bayer (1924a).....	92
Figure 80. Flow patterns of floodwaters within Gudenus Cave during the inundation phases recorded by this project. The powerful eddy in the cave's central chamber is responsible for the tribological wear on walls, stone tools and faunal remains.	94
Figure 81. Tree pollen spectra from the Gudenus Cave sediment samples.....	99
Figure 82. Non-tree pollen spectra from the Gudenus Cave sediment samples.....	100
Figure 83. Spore spectra from the Gudenus Cave sediment samples.....	101
Figure 84. Frequency distribution of dolomite contents for 302 loesses from open-air sites in central Europe.....	104
Figure 85. Schematic depiction of the analytical procedures, carbonate differentiation analysis of Gudenus Cave sediment samples.....	105
Figure 86. Dolomite fractions of carbonates in % as a function of absolute depth; sample 5 is partly fluvial sand with small lenses of worn gravel and does not reflect the trend in loess composition.....	106
Figure 87. The marine isotope stages from the Mindel-Riss (Holstein?) Interglacial to the present time.....	111
Figure 88. Heavily waterworn and patinated amygdaloidal hand axe of quartzite, fractured at the base and of archaic typology. Drawing of the implement by Obermaier and Breuil (1908).....	116
Figure 89. Another amygdaloidal waterworn hand axe but made from high-quality jaspilite and fire damaged.....	116
Figure 90. Amygdaloidal rolled hand axe of yellow jaspilite.....	117
Figure 91. Heavily waterworn ovoid chert flake attributed to the Acheulean occupation layer.....	117
Figure 92. The eight most commonly found hand axe types are distinguished based on ideal morphological forms.....	118

Figure 93. Cordiform hand axe with distinctive méplat.....	119
Figure 94. Cordiform Middle Palaeolithic hand axe of Micoquian type.....	119
Figure 95. Distal fragment of a lanceolate chert hand axe.....	119
Figure 96. Reconstruction by Obermaier and Breuil (1908) of Micoquian-type hand axe.....	120
Figure 97. Very small Micoquian-type hand axe of jaspilite.....	120
Figure 98. Three artefacts of Occupation Levels II or III: flint scraper 17-6, un-numbered pre-1962 specimen, convex jaspilite scraper 17-1.....	121
Figure 99. An example of a pre-1962 lithic from Gudenus Cave not included in Obermaier and Breuil's (1908) analysis: a Mousterian point most probably from Occupation Layer III.....	122
Figure 100. Some of the translucent quartz crystal implements from Gudenus Cave.....	122
Figure 101. Palaeolithic cave sites in Austria.....	132
Figure 102. Watercolour by S. Rosenstingl of an expedition J. A. Nagel led into the Drachenhöhle in 1748.....	134
Figure 103. North-south section of the occupation site, adapted from Abel and Kyrle (1931).....	135
Figure 104. Palaeolithic occupation sites in the vicinity of Peggau, central Styria.....	138
Figure 105. Wolf incisor, expertly perforated at its root, from the Middle Palaeolithic occupation layer of Repolusthöhle.....	141
Figure 106. Global distribution of Acheulean sites.....	151

List of Tables

Table 1. Climatic data from the plateau margin and outside Gudenus Cave, 13 to 16 October 1981, listing air temperature, relative air humidity, wind speed in m/s, wind direction and percentage of cloud cover.	35
Table 2. Climatic data from outside and inside Gudenus Cave, 13 to 16 October 1981, listing air temperature, relative air humidity, wind speed in m/s, wind direction and percentage of cloud cover.	36
Table 3. Botsball measurements and air temperatures inside and outside Gudenus Cave, taken over 24 hours on 3 and 4 February 1981.	37
Table 4. Botsball measurements, air temperatures inside and outside Gudenus Cave, and air temperatures at the entrances taken over 24 hours on 8 and 9 August 1981.	38
Table 5. Measured annual water flows at the Krems river Imbach gauge and the calculated annual flows of the Kleine Krems at Gudenus Cave for selected 19 years between 1948 and 1975.	43
Table 6. The finds from the upper occupation layer [III] in the recess behind Blocks 1 and 2.	49
Table 7. The finds from the lower occupation layer [II] in the recess behind Blocks 1 and 2.	50
Table 8. The finds that had eroded from an occupation layer higher up [IV] and were collected in a rock fissure about -20 cm below BM, and the two lithics recovered in situ from the cultural layer.	50
Table 9. The finds from the upper occupation layer [III] in the Crevice behind Blocks 3 and 4.	54
Table 10. The finds from the lower occupation layer [II] in the Crevice behind Blocks 3 and 4.	54
Table 11. The finds from the lowest occupation layer [I] in the Crevice behind Blocks 3 and 4.	56
Table 12. The complete or fragmentary stone tools of reliably known provenance from Gudenus Cave.	60
Table 13. Faunal remains from Gudenus Cave identified by Woldřich (1893), listing about 1590 specimens.	76
Table 14. The sediment samples from Gudenus Cave.	80
Table 15. Granulometric analysis of the fraction >60 microns of the nine sediment samples analysed.	81
Table 16. Sample DS-8, Sedimentation test to determine small particle size distribution.	82
Table 17. Sample DS-9, Sedimentation test to determine small particle size distribution.	83
Table 18. Sample DS-1, Sedimentation test to determine small particle size distribution.	84
Table 19. Sample DS-2, Sedimentation test to determine small particle size distribution.	85
Table 20. Sample DS-3, Sedimentation test to determine small particle size distribution.	86
Table 21. Sample DS-6, Sedimentation test to determine small particle size distribution.	88
Table 22. Sample DS-7, Sedimentation test to determine small particle size distribution.	89
Table 23. Sample DS-5, Sedimentation test to determine small particle size distribution.	90
Table 24. Sample DS-10, Sedimentation test to determine small particle size distribution.	91
Table 25. Sample weight, the weight of organic matter and percentage of organic matter.	91
Table 26. The nine sediment samples subjected to pollen analysis.	95
Table 27. The pollens, spores and algae found in eight of the nine sediment samples from Gudenus Cave.	95
Table 28. The percentages of pollens, spores and algae found in each of the eight spectra from Gudenus Cave.	97
Table 29. Primary matrix of results of the carbonate differentiation analysis, Gudenus Cave, Austria.	105
Table 30. Regression analysis of carbonate differentiation analysis of Gudenus Cave sediments.	106
Table 31. Bayer's comparison of his chronology with the sequences of Obermaier, Soergel and Penck (after Bayer 1927d).	133
Table 32. The chronological/typological positions of the Austrian Palaeolithic cave sites as considered here.	146

Preface

The project of Pleistocene archaeology is fraught with many epistemological adversities. The discipline's humanistic rather than scientific basis is at the root of many of these and has determined much of the historical trajectory of the discipline. For instance, the common practice of rejecting significant paradigm changes and promoting false models has characterised much of the course of archaeology for well over one and a half centuries. The tendency to reject significant improvements by clinging to conservative but false views can fairly be described as one of its hallmarks. Inevitably, such corrections were introduced by non-archaeologist heretics and were rejected unanimously by the world's archaeologists. For instance, if it had not been for the persistence of customs official Jacques Boucher de Crèvecœur de Perthes (1788–1868), Pleistocene archaeology would not have been introduced in the mid-19th century. In 1858, a unanimous declaration was issued at a large French archaeology congress that all of de Perthes' stone tools from the Abbeville and St Acheul region were 'a worthless collection of randomly picked up pebbles'. The following year, two British non-archaeologists, who had done precisely what good scientists do (testing falsifiable propositions), announced that de Perthes had been right for almost three decades. Hugh Falconer and Joseph Prestwich, who had taken part in the supervised 1858 excavation of Windmill Hill Cave, Brixon, by yet another autodidact, William Pengelly, had decided to dig alongside one of de Perthes' trenches. They confirmed his finding that humans using Acheulean stone tools lived simultaneously as Ice Age fauna.

In witnessing his vindication in his lifetime, de Perthes was fortunate, which other pioneers in the discipline were not. The discoverer of fossil man, schoolteacher Johann Carl Fuhlrott (1803–1877), died decades before his find from Kleine Feldhofer Cave was recognised, and he received no posthumous recognition. The discoverer of Ice age rock art, Don Marcelino Santiago Tomás Sanz de Sautuola (1831–1888), died a bitter and broken man because of his complete rejection by archaeology. That he was accused of having faked the rock paintings of Altamira Cave without any effort to examine his evidence weighs heavily on the discipline. The discoverer of *Homo erectus*, physician Eugène Dubois (1858–1941), was treated just as severely from the 1890s to the 1930s. Indeed, there is a pattern emerging of a delay of about forty years in accepting major paradigmatic changes in archaeology and palaeoanthropology. For instance, anatomist Raymond Arthur Dart (1893–1988) reported the discovery of *Australopithecus* in 1924, but it was almost completely ignored. After all, at the time it was well known that hominins first evolved in England, as borne out by the perfect specimen found in a Piltdown gravel pit. That it was an obvious fake did not make much difference. It took forty years again to correct the blunder — and the attention of scientists like Kenneth Oakley.

The discovery in 1924 of the Glozel site complex in central France by teenager Émile Fradin is of particular interest because it illustrates most starkly the reasons for the acrimonious responses by archaeology when it fears its authority threatened. Fradin's find challenged several French senior scholars, and when the curator of the Louvre and the director of the French Prehistoric Society accused him of fraud, Fradin filed for defamation. He was beaten during a police raid on his home, and it took to 1932 for him to be vindicated in court. Several decades later, avocational archaeologists demonstrated that, apart from material planted by professional archaeologists to discredit the site, the Glozel finds were all authentic.

The same pattern has continued ever since. Examples abound, including the pandemonium after radiocarbon analysis was introduced, the treatment of Alexander Marshack, the Côa affair in Portugal, the Jinmium affair in Australia, and many others (Bednarik 2013a). To this day, the absurd 'African Eve' hypothesis holds sway in archaeology, even though it was introduced by a discredited German professor who faked his data, and it lacks any archaeological, palaeoanthropological or genetic evidence in its favour. The far more economical and vastly better supported alternative hypothesis of the origins of present humans (the auto-domestication theory) remains disregarded and undiscussed, just as de Perthes had complained: 'They employed against me a weapon more potent than objections, than criticism, than satire or even persecution — the weapon of disdain. They did not discuss my facts; they did not even take the trouble to deny them. They disregarded them.' Another current example is the discipline's belief in an invented species it calls *Homo floresiensis*, rejecting the much more reasonable explanation of the Liang Bua remains.

This brief characterisation of Pleistocene archaeology and the pedigree of many of its propositions illustrates the need for a critical approach to its authority. This is, after all, by far not the only adversity for the discipline. The more fundamental epistemological burden preventing it from becoming a science is the lack of refutability of its propositions. Each section of each layer of each excavated site is unique and can only be a 'sample' of itself. It does not 'represent' anything else, and it can only be excavated once; whatever data are not collected at that time are

irrecoverably lost. Not only can the excavation not be repeated, but the observations reported can only be accepted as personal views. That explains the unusual sensitivity of the discipline to criticisms: since it relies so heavily on individual authority rather than repeatability or testability as in the sciences, it simply cannot tolerate challenges to that perceived authority.

A particular problem with the inability of repeating an excavation is that, when Pleistocene archaeology began after the mid-19th century, it was completely unknown what variables needed to be recorded as sediment was dug. This knowledge had to be acquired gradually, essentially from mistakes made. This is easier said than done in a field that finds it hard to admit its mistakes, and especially one that presents its findings in non-falsifiable formats at the best of times. In practical terms, this meant that during the second half of the 19th century and even for several subsequent decades, many hundreds of the prime Pleistocene sites — especially in Europe — were subjected to excavations through which the discipline hoped to achieve its methodological bootstrapping. The enormous cost of this process was the destruction of most key Pleistocene occupation sites. This volume records the efforts of recovering data from one of these hundreds of sites supposedly depleted during this pioneering phase of archaeology.

All of this is perfectly understandable but what should be of concern is that the average level of data recovery in modern excavations still leaves so much to be desired. It will be regarded as hopelessly antiquated some centuries from now. Much of it forms part of the grinding mill of securing academic degrees or advancement. However, the number of suitable sites is finite, and at the rate they are still excavated, there must come a time eventually when no prime sites will be left. Indeed, there has recently been a profitable trend towards focusing on the reassessment of Pleistocene sites subjected to previous attention.

Certainly, archaeology has adopted many scientific methods in interpreting data, but even this commendable tendency has led to countless misinterpretations. An example we are familiar with is the numerous claims of rock art age proposed, based on various methods. Consider, for instance, the many such applications of uranium-thorium analysis in this pursuit. It has been demonstrated that the method is unsuitable for reprecipitated carbonates such as speleothem skins and travertines (Tang et al. 2020), yet we have most recently seen a claim that rock art in Tibet is around 200,000 years old based purely on misuse of this method (Zhang et al. 2021). It was made in the wake of many other recent sensationalist assertions about $^{230}\text{Th}/^{234}\text{U}$ ages of rock art, especially from Spain. In the pursuit of spectacular archaeological claims, the veracity of propositions imported from the sciences can easily become casualties, and objections by scientists are then ignored.

The present volume is the result of six decades of work applied to one of the hundreds of Pleistocene occupation sites excavated across Europe in the quest to learn how archaeological excavations should be conducted. In Austria and elsewhere, some of these sites were literally quarried, for instance, for phosphate needed to compensate for shortages imposed by more important business — such as conducting world wars. Gudenus Cave is one of many Pleistocene sites in Europe that had been regarded as entirely bereft of any sediment until they were subjected to more detailed examination that led to tangible improvements of our knowledge about them. The research efforts so far applied to this significant site had not clarified any concerns of archaeology: the number of human occupations, their respective ages, the ages of any of the faunal remains recovered from the site, the nature of the sediment layers in the cave, how they came to be deposited, or the environmental conditions at the times of their deposition. Virtually nothing of archaeological relevance was known about this most important site, except that it had contained a great deal of evidence of Palaeolithic human occupation and Pleistocene faunal material: no apparent progress since Boucher de Perthes. The issue was not about the failure of the initial excavators of 1883/84 to provide better-resolution empirical evidence. They merely contributed to archaeology's endeavours to establish the methodological parameters and protocols of the discipline. Nor is it about the failure during many subsequent decades to extricate the missing information. It is about the inaction of the responsible agencies to do so when Gudenus Cave faced obliteration by a hydroelectric scheme in 1962, and they were informed that the site still contained intact sediments and other sources of archaeologically important information. With the site destined to disappear entirely within years, it was left to a young scholar without any official support to salvage what was salvageable. He considered it scientifically unpardonable to forfeit this opportunity to restore the site's importance. This volume is a record of his life's labour of love.

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Melbourne

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R. G. Bednarik