

Contents

	Page
List of figures	vii
List of tables	xiv
Abstract	xv
Preface	xvi
Acknowledgements	xvii
Abbreviations	xviii

Chapter 1

THE PAST AND PRESENT ALPINE REGION: A GENERAL OVERVIEW

1.1	Introduction	1
1.2	The Alps: location and morphological structure	1
1.3	The hydrology of the Alps: rivers and lakes	1
1.4	The Alpine climate from the last glaciation to the present	3
1.5	Flora and fauna of the Alpine valleys in the past 11,000 years	4
1.6	Human occupation and mobility within the prehistoric Alpine region	6
1.7	Cultural transformations of the Alpine environment: subsistence and economy from the Neolithic to the Bronze Age	8

Chapter 2

LAKE-DWELLINGS IN THE ALPS: DISCOVERIES AND SCIENTIFIC RESEARCH

2.1	Introduction	11
2.2	The 19 th century: the beginning of the lake-dwelling phenomenon	11
2.3	Lake-dwelling studies in the first half of the 20 th century	13
2.4	Second half of the 20 th century: two decades of lake-dwelling research 1950-1970	14
2.4.1	Lake-dwellings vs non-lake-settlements: new research development	14
2.5	Scientific research on lake-dwellings in the 1970s and 1980s	15
2.6	Recent developments in lake-settlement research	16

Chapter 3

THE LAKE-DWELLING “PROBLEM”

3.1	Introduction	18
3.2	The beginning of the lake-dwelling phenomenon in the Alps	18
3.3	The Ober Meilen discovery	18
3.4	Ferdinand Keller’s dogma	18

3.5	The need for a typological differentiation	19
3.6	From lake-dwellings to lakeside-dwellings	20
3.7	The <i>Pfahlbauproblem</i> is no longer a problem	20

Chapter 4 DATING THE ALPINE LAKE-DWELLINGS

4.1	Introduction	22
4.2	Relative dating: stratigraphy and pottery typology	22
4.3	The ¹⁴ C dating method	24
4.4	Dendrochronology: a revolution in precision	26
4.5	Thermoluminescence vs pottery typology	28
4.6	Additional chronometric analyses as a help for chronology	29
4.7	Correlations between the various dating techniques	31

Chapter 5 THE BRONZE AGE IN THE ALPS: CHRONOLOGY AND ARCHAEOLOGICAL PERIODISATION

5.1	Introduction	33
5.2	A chronological view of the Bronze Age in central Europe	34
5.3	Bronze Age in the Alps: absolute dating vs typology	35
5.4	The Bronze Age as an archaeological periodisation within the Alpine region	35

Chapter 6 LAKE-DWELLINGS AND THE ARCHAEOLOGICAL RECORD: AVAILABILITY AND STATISTICAL ANALYSES

6.1	Introduction	42
6.2	Sites state of preservation and discoveries: two important factors in the lake-dwelling chronological studies	42
6.3	Comparative analyses of the quantitative and qualitative distribution of the lacustrine sites within the whole Alpine region	45
6.4	Comparative analyses of the quantitative and qualitative Bronze Age lake-dwellings distribution on Lake Constance and Lake Zurich	47

Chapter 7 THE BRONZE AGE LAKE-DWELLING PHENOMENON IN EACH OF THE SIX ALPINE COUNTRIES

7.1	Introduction	72
7.2	Lake-dwellings in Switzerland	72
7.2.1	Archaeological research: policies and methods	72

7.2.2	Swiss Bronze Age lacustrine settlements	73
7.3	The <i>Pfahlbauten</i> in Germany	75
7.3.1	Lake-dwelling archaeological research	75
7.3.2	South German Bronze Age lake-settlements	76
7.4	The <i>Seeufersiedlungen</i> in Austria	77
7.4.1	Austrian lacustrine settlements: history of research	77
7.4.2	Bronze Age lake-dwellings in Austria	77
7.5	The <i>stations lacustres</i> in France	77
7.5.1	The French lake-dwelling history of archaeological research	78
7.5.2	The Bronze Age lake-settlements of France	78
7.6	The <i>palafitte lacustri</i> in northern Italy	79
7.6.1	Italian lake-dwellings and the past archaeological research	79
7.6.2	The Bronze Age north Italian <i>villaggi lacustri</i>	79
7.7	The <i>kolisca</i> in Slovenia	81
7.7.1	Lake-dwelling archaeological research	81
7.7.2	Slovenian Bronze Age lake-settlements	81

Chapter 8 ON THE BRINK OF 15TH CENTURY BC: THE LAST EARLY BRONZE AGE LAKE-SETTLEMENTS

8.1	Introduction	95
8.2	1500-12th century BC: more than three centuries of lake-villages absence in the northern parts of the Alps	95
8.3	Lacustrine sites immediately preceding the “missing period”	97
8.3.1	ZH-Mozartstrasse (Lake Zurich, CH)	97
8.3.2	Arbon-Bleiche 2 (Lake Constance, CH)	102
8.3.3	Bodman-Schachen 1 (Lake Constance, D)	105
8.4	Siedlung-Forschner and Fiavé: two middle Bronze Age “non”-lake-dwelling sites	110

Chapter 9 THE MIDDLE BRONZE AGE LAKE-DWELLING HIATUS IN THE NORTHERN PARTS OF THE ALPS: AN ENVIRONMENTAL APPROACH

9.1	Introduction	115
9.2	Lack of continuity: the Bronze Age lake-dwelling occupational pattern in the Alps	115
9.3	Climatic changes in the northern Alpine region during the Bronze Age	117

9.4	Climatic and hydrologic conditions of Lake Constance and Lake Zurich: past and present	120
9.4.1	Short- and long-term lake level variations	121
9.5	GIS approach to lake levels fluctuations at ZH-Mozartstrasse, Arbon-Bleiche 2 and Bodman-Schachen 1: introduction to computer simulations	123
9.5.1	ZH-Mozartstrasse	126
9.5.2	Arbon-Bleiche 2	127
9.5.3	Bodman-Schachen 1	128
9.6	The Middle Bronze Age lake-dwelling hiatus: analysis of the environmental approach	129

Chapter 10 LAKE-DWELLERS' COGNITIVE RESPONSE TO ENVIRONMENTAL CHANGE

10.1	Introduction	141
10.2	Loss of tillable land as a possible cause of a socio-economic crisis	141
10.3	Trade and interaction as means of cultural diffusion: evidence from pottery typological analyses	143
10.4	Lake-settlements abandonment as a cultural choice: the late EBA exodus from the northern Alpine lakes	145
10.5	From environmental to cultural change	147

Chapter 11 MIDDLE BRONZE AGE LAND SETTLEMENTS AROUND LAKE CONSTANCE AND LAKE ZURICH WITH POSSIBLE ORIGINS IN THE LACUSTRINE TRADITION

11.1	Introduction	150
11.2	From "wet" to "dry" life: adaptation to a new environment	150
11.3	MBA land settlements around Lake Constance	152
11.4	MBA land sites in the surroundings of Lake Zurich	156
11.5	MBA hill sites on Lake Zug	159

Chapter 12 CONCLUSIONS

12.1	Middle Bronze Age lake-dwelling "missing period" in the northern Alpine region	162
------	--	-----

References		165
-------------------	--	-----

Appendix: Database of the Alpine region lake-dwellings		185
---	--	-----