

<u>1 Plateau Uplift of the Rhenish Massif - Introductory Remarks</u>	
J.H. Illies and K. Fuchs	1
 <u>2 Regional Tectonic Setting and Geological Structure of the Rhenish Massif</u>	
H. Murawski, H.J. Albers, P. Bender, H.-P. Berners, St. Dürr, R. Huckriede, G. Kauffmann, G. Kowalczyk, P. Meiburg, R. Müller, A. Muller, S. Ritzkowski, K. Schwab, A. Semmel, K. Stapf, R. Walter, K.-P. Winter, and H. Zankl	9
 <u>3 Pre-Quaternary Uplift in the Central Part of the Rhenish Massif</u>	
W. Meyer, H.J. Albers, H.P. Berners, K.v.Gehlen, D. Glatt- haar, W. Löhnertz, K.H. Pfeffer, A. Schnütgen, K. Wienecke, and H. Zakosek	39
 <u>4 Plateau Uplift During Pleistocene Time</u>	47
4.1 Plateau Uplift During Pleistocene Time - Preface	
A. Semmel	48
4.2 The Early Pleistocene Terraces of the Upper Middle Rhine and Its Southern Foreland - Questions Concerning Their Tectonic Interpretation	
A. Semmel	49
4.3 Distribution and Dimension of Young Tectonics in the Neuwied Basin and the Lower Middle Rhine	
E. Bibus	55
4.4 The Rhine Valley Between the Neuwied Basin and the Lower Rhenish Embayment	
K. Brunnacker and W. Boenigk	62
4.5 The Tectonic Position of the Lower Mosel Block in Relation to the Tertiary and Old Pleistocene Sediments	
E. Bibus	73
4.6 Cenozoic Deposits of the Eifel-Hunsrück Area Along the Mosel River and Their Tectonic Implications	
J. Negendank	78

4.7	Neotectonic Movements at the Southern and Western Boundary of the Hunsrück Mountains (Southwestern Part of the Rhenish Massif)	
	L. Zöller	89
4.8	The Lower Pleistocene Terraces of the Lahn River Between Dietz (Limburg Basin) and Laurenburg (Lower Lahn)	
	W. Andres and H. Sewering	93
4.9	Quaternary Tectonics and River Terraces at the Eastern Margin of the Rhenish Massif	
	K.H. Müller and S. Lipps	98
4.10	The Late Tertiary-Quaternary Tectonics of the Palaeozoic of the Northern Eifel	
	R. Müller	102
4.11	The Quaternary Destruction of an Older, Tertiary Topography Between the Sambre and Ourthe Rivers (Southern Ardennes)	
	H.P. Berners	108
5	<u>Volcanic Activity</u>	111
5.1	Distribution of Volcanic Activity in Space and Time	
	H.J. Lippolt	112
5.2	Tertiary Volcanism of the Hocheifel Area	
	H.-G. Huckenholz	121
5.3	Volcanism in the Southern Part of the Hocheifel	
	E. Bussmann and V. Lorenz	129
5.4	Tertiary Volcanism in the Siebengebirge Mountains	
	K. Vieten	131
5.5	Tertiary Volcanism in the Westerwald Mountains	
	K. von Gehlen and W. Forkel	133
5.6	Tertiary Volcanism in the Northern Hessian Depression	
	K.H. Wedepohl	134
5.7	The Quaternary Eifel Volcanic Fields	
	H.-U. Schmincke, V. Lorenz, and H.A. Seck	139
5.8	Carbon Dioxide in the Rhenish Massif	
	H. Puchelt	152
5.9	Eocene to Recent Volcanism Within the Rhenish Massif and the Northern Hessian Depression - Summary	
	H.A. Seck	153
6	<u>Present-Day Features of the Rhenish Massif</u>	163
6.1	Height Changes in the Rhenish Massif: Determination and Analysis	
	H. Mälzer, G. Hein, and K. Zippelt	164

6.2	Stress Field and Strain Release in the Rhenish Massif H. Baumann and J.H. Illies	177
6.3	General Pattern of Seismotectonic Dislocation and the Earthquake-Generating Stress Field in Central Europe Between the Alps and the North Sea L. Ahorner, B. Baier, and K.-P. Bonjer	187
6.4	Historical Seismicity and Present-Day Microearthquake Activity of the Rhenish Massif, Central Europe L. Ahorner	198
6.5	Microearthquake Activity Near the Southern Border of the Rhenish Massif B. Baier and J. Wernig	222
6.6	Geothermal Investigations in the Rhenish Massif R. Haenel	228
6.7	The Gravity Field of the Rhenish Massif W.R. Jacoby, H. Joachimi, and C. Gerstenecker	247
7	<u>Crust and Mantle Structure, Physical Properties and Composition</u>	259
7.1	The Long-Range Seismic Refraction Experiment in the Rhenish Massif J. Mechie, C. Prodehl, and K. Fuchs	260
7.2	Combined Seismic Reflection-Refraction Investigations in the Rhenish Massif and Their Relation to Recent Tectonic Movements R. Meissner, M. Springer, H. Murawski, H. Bartelsen, E.R. Flüh, and H. Dürschner	276
7.3	Electrical Conductivity Structure of the Crust and Upper Mantle Beneath the Rhenish Massif H. Jödicke, J. Untiedt, W. Olgemann, L. Schulte, and V. Wagenitz	288
7.4	The Evolution of the Hercynian Crust - Some Implications to the Uplift Problem of the Rhenish Massif P. Giese	303
7.5	Large-Scale Mantle Heterogeneity Beneath the Rhenish Massif and Its Vicinity from Teleseismic P-Residuals Measurements S. Raikes and K.-P. Bonjer	315
7.6	Crustal Xenoliths in Tertiary Volcanics from the Northern Hessian Depression K. Mengel and K.H. Wedepohl	332
7.7	Crustal Xenoliths and Their Evidence for Crustal Structure Underneath the Eifel Volcanic District G. Voll	336

7.8	Mantle Xenoliths in the Rhenish Massif and the Northern Hessian Depression H.A. Seck and K.H. Wedepohl	343
7.9	Relation of Geophysical and Petrological Models of Upper Mantle Structure of the Rhenish Massif K. Fuchs and K.H. Wedepohl	352
8	<u>Attempts to Model Plateau Uplift</u>	365
8.1	Gravity Anomaly and Density Distribution of the Rhenish Massif J. Drisler and W.R. Jacoby	366
8.2	Uplift, Volcanism and Tectonics: Evidence for Mantle Diapirs at the Rhenish Massif H.J. Neugebauer, W.-D. Woïdt, and H. Wallner	381
9	<u>Epilogue: Mode and Mechanism of Rhenish Plateau Uplift</u> K. Fuchs, K. von Gehlen, H. Mälzer, H. Murawski, and A. Semmel	405