

Scanned by TapScanner

CONTENTS

CHAPTER I	
Features of the Earth's Surface: The Tetrahedral	
Theory	
a. An Analysis of the More Important Features of the Earth's Surface	-
A. THE RIGID MASSES	6
(a) The Baltic Shield	7
(b) The Siberian Shield	8
(c) The Chinese Table (d) The Indian Table	II
(e) Australia	11
(f) Africa (g) The Canadian Shield	13
(h) South America	15
(i) Anterctica	19
B. GEOSYNCLINES	20
C. MOUNTAIN SYSTEMS	
(a) Pre-Cambrian Systems (b) The Caledonian Systems	30
(c) The Variscan Systems	32 35 39
(c) The Variscan Systems (d) The Alpine Systems	39
D. THE ATLANTIC AND PACIFIC OCEANS	45
E. THE ISLAND ARCS	49
F. SUBMARINE CANYONS	53
CHAPTER II: THE STRUCTURE OF THE EARTH	I
r. Introductory	58
2. Evidence of Seismology	60
3. Isostasy	70
CHAPTER III: ILLUSTRATIONS OF THE STRUC]-
TURES OF MOUNTAIN RANGES	
Introduction	
1. The Pre-Cambrian Orogenesis in Anglesey	76
2. The Caledonian Orogeny	
(a) The North-West Highlands	80
(a) The North-West Highlands (b) The South-West Highlands (c) Comparison of the Scottish and Scandinavian Caledonides	90
3. The Variscan Orogeny	
(a) The Franco-Belgian Coal-field	94
(b) The Mendips	105

THE UNSTABLE EARTH

4. The Alpine Orogeny	
(a) Generalities	108
(b) The West Alps (c) The East Alps (d) Views of East Alpine Geologists	111
(c) The East Alps	122
	136
Appendix	
Posthumous Folding	129
CHAPTER IV: RECENT THEORIES	
Introductory	134
1. The Planetesimal Hypothesis of Chamberlin	137
2. The Geosynclinal-Orogen Theory of Kober	144
3. The Thermal Contraction Theory of Jeffreys	152
4. The Drift Theory of Wegener	159
5. Drift and Orthodoxy	174
6. Radioactivity and the Surface History of the Earth-	
Joly	180
7. The Hypothesis of Sliding Continents-Daly	186
8. Holmes' Convention Current Theory -	193
Conclusion	201
CHAPTER V: RAISED BEACHES AND RIVER TERRACES	
A. Raised Beaches	
(1) Nature of the Evidence	
(2) The Sedimentary Cycle	207
(3) Some General Difficulties in Correlation: Stable, Isostatic	
and Orogenic Areas	213
(4) The British Isles and Scandinavia (5) The Mediterranean and Western and Northern France	216
(6) South Africa	223
	-3-
B. River Terraces	
(1) Generalities: International Commission	233
(2) France and the Mediterranean (2) The Terraces of the Thomas and Cam	237
(3) The Terraces of the Thames and Cam	239
C. Eustatic and Isostatic Theories	249
D. Nature of the Difficulties Confronting Attempts a	t
Correlation	260
ADDENDIN	
APPENDIX	-
Longitudinal Profiles in the R. Towy	265

CONTENTS

CHAPTER VI: CORAL REEFS AND CORAL ISLANDS

1. The Problem of Coral Reefs: Theories	
(a) Introduction (b) Darwin and Dana	267
(c) Theories Alternative to the Subsidence Theory of Darwin and Dana	269
(d) Daly and the Glacial Control Theory	272
(e) Davis: the Application of Physiography to the Problem	276
(f) The Marginal Belts	282
	285
(g) Bores (h) Summary	287
TI. Const Parrier DesC CO	290
2. The Great Barrier Reefs of Queensland	291
3. Coral Islands	
(a) Atoll "Islands"	308
(b) Funafuti	311
(c) Sand Cays and Low Wooded Islands (Island Reefs) of the Great Barrier Reefs	
(d) Coral Islands near Java: Comparison with the Island	315
Reefs of Queensland	3 1 +
CHAPTER VII	
Conclusion	328
Bibliography	33I
Index	
	335