Contents

	List of contributors	х
	Acknowledgment	xiii
1	Introduction	1
	HENRY F. DIAZ AND VERA MARKGRAF	
	SECTION A ENSO in the modern record	5
2	Atmospheric teleconnections associated with the extreme phase of the Southern Oscillation	7
	HENRY F. DIAZ AND GEORGE N. KILADIS	
3	El Niño/Southern Oscillation and streamflow in the western United States	29
	DANIEL R. CAYAN AND ROBERT H. WEBB	
4	Coupled climate model simulation of El Niño/Southern Oscillation: implications for paleoclimate GERALD A. MEEHL AND GRANT W. BRANSTATOR	69
	SECTION B Use of historical records in ENSO reconstructions	93
5	Historical and prehistorical overview of El Niño/Southern Oscillation	95
	DAVID B. ENFIELD	
6	A study of Southern Oscillation-related climatic activity for	
	A.D. 622-1990 incorporating Nile River flood data	119
	WILLIAM H. QUINN	

7	Historical El Niño/Southern Oscillation variability in the	151
	Australasian region	151
0	NEVILLE NICHOLLS A comparison of Southern Oscillation and El Niño signals	
8	in the tropics	175
	HENRY F. DIAZ AND ROGER S. PULWARTY	
9	Long-term changes in the frequency of occurrence of	
	El Niño events	193
	ROGER Y. ANDERSON	
	SECTION C Paleoclimate reconstructions of El Niño/	
	Southern Oscillation from tree-ring records	201
10	Using tree rings to study past El Niño/Southern Oscillation	
	influences on climate	203
	EDWARD R. COOK	
11	An index of the Southern Oscillation reconstructed from	
	western North American tree-ring chronologies	215
	J. M. LOUGH	
12	Spectral properties of tree-ring data in the United States Southwest as related to El Niño/Southern Oscillation	227
	DAVID M. MEKO	221
13	A tree-ring reconstruction of New Mexico winter precipitation	
10	and its relation to El Niño/Southern Oscillation events	243
	ROSEANNE D. D'ARRIGO AND GORDON C. JACOBY	
14	Temporal patterns of El Niño/Southern Oscillation - wildfire	
	teleconnections in the southwestern United States	259
	THOMAS W. SWETNAM AND JULIO L. BETANCOURT	
15	Secular variability of the Southern Oscillation detected in	
	tree-ring data from Mexico and the southern United States	271
	MALCOLM K. CLEAVELAND, EDWARD R. COOK, AND DAVID W. STAHLE	
		202
	SECTION D Records from ice cores and corals	293
10	5 Reconstructing interannual climate variability from tropical and subtropical ice-core records	295
	L. G. THOMPSON, E. MOSLEY-THOMPSON, AND	295
	P. A. THOMPSON	
17	7 A comparison of proxy records of El Niño/Southern	
	Oscillation	323
	JOEL MICHAELSEN AND L. G. THOMPSON	
18	8 Coral monitors of El Niño/Southern Oscillation dynamics	
	across the equatorial Pacific	349
	JULIA E. COLE, GLEN T. SHEN, RICHARD G. FAIRBANKS, AND MICHAEL MOORE	

	SECTION E Low-resolution paleoclimate reconstruction of El Niño/Southern Oscillation: marine and terrestrial	
	proxy indicators	377
19	Fishery catch records, El Niño/Southern Oscillation, and longer-term climate change as inferred from fish remains in	
	marine sediments	379
	GARY D. SHARP	
20	Long-term changes in El Niño/Southern Oscillation: evidence	
	from marine and lacustrine sediments	419
	ROGER Y. ANDERSON, ANDY SOUTAR, AND THOMAS C. JOHNSON	
21	El Niño/Southern Oscillation climatic variability in	
	Australasian and South American paleoenvironmental	
	records	435
	M. S. MCGLONE, A. P. KERSHAW AND VERA MARKGRAF	
22	Synthesis and future prospects	463
	HENRY F. DIAZ, VERA MARKGRAF, AND MALCOLM K. Hughes	

Index

473