

RECENT DEVELOPMENTS IN FLUVIAL SEDIMENTOLOGY

TABLE OF CONTENTS

PREFACE	iii
ACKNOWLEDGMENTS	v
RECENT DEVELOPMENTS IN THE STUDY OF FACIES MODELS A. D. Miall	1

PART I. SEDIMENT TRANSPORT AND HYDRAULICS

TOWARD A BETTER UNDERSTANDING OF BEDLOAD TRANSPORT I. Reid and L. E. Frostick	13
ELECTROMAGNETIC DETECTION OF PEBBLE TRANSPORT IN STREAMS: A METHOD FOR MEASUREMENT OF SEDIMENT-TRANSPORT WAVES S. G. Custer, P. E. Ergenzinger, B. C. Anderson, and N. Bugosh	21
FLOW DYNAMICS AT RIVER CHANNEL CONFLUENCES: IMPLICATIONS FOR SEDIMENT TRANSPORT AND BED MORPHOLOGY J. L. Best	27
LOCATION-DEPENDENT SEDIMENT SORTING IN BEDFORMS UNDER WANING FLOW IN THE RIO GRANDE, CENTRAL NEW MEXICO D. W. Love, A. Gutjahr and S. Robinson-Cook	37

PART II. SEDIMENT DEPOSITION IN MODERN CHANNEL, FLOODPLAIN AND FLUVIAL-DELTAIC ENVIRONMENTS

A RECONNAISSANCE OF SEDIMENTATION ON THE KOSI ALLUVIAL FAN OF INDIA N. A. Wells and J. A. Dorr, Jr.	51
BRAHMAPUTRA RIVER: CHANNEL MIGRATION AND DEPOSITION C. S. Bristow	63
GRAVEL COUNTERPOINT BARS: EXAMPLES FROM THE RIVER TYWI, SOUTH WALES S. A. Smith	75
MEANDERING RIVER POINT BAR LITHOFACIES MODELS: MODERN AND ANCIENT EXAMPLES COMPARED D. G. Smith	83
LATERAL ACCRETION SURFACES IN EPHEMERAL-STREAM POINT BARS, RIO PUERCO, NEW MEXICO R. G. Shepherd	93
CHANNEL AND FLOODPLAIN FACIES IN A WANDERING GRAVEL-BED RIVER J. R. Desloges and M. Church	99
SEDIMENTOLOGY AND FACIES ARCHITECTURE OF OVERBANK DEPOSITS OF THE MISSISSIPPI RIVER, FALSE RIVER REGION, LOUISIANA K. M. Farrell	111
DELTAIC DEPOSITIONAL PROCESSES IN A GLACIER-FED LAKE: A MODEL FOR THE FLUVIAL/LACUSTRINE INTERFACE J. Bogen	121

PART III. PALEOHYDROLOGY AND VERTEBRATE TAPHONOMY

LARGE-SCALE FLOOD DEPOSITS ASSOCIATED WITH THE FORMATION OF COARSE-GRAINED, BRAIDED TERRACE SEQUENCES J. K. Maizels	135
PALEOHYDROLOGY OF SOME OGALLALA (NEOGENE) STREAMS IN THE SOUTHERN PANHANDLE OF NEBRASKA R. G. Goodwin and R. F. Diffendal, Jr.	149
VERTEBRATE TAPHONOMY APPLIED TO THE ANALYSIS OF ANCIENT FLUVIAL SYSTEMS E. H. Koster	159
MIocene FLUVIAL FACIES AND VERTEBRATE TAPHONOMY IN NORTHERN PAKISTAN A. K. Behrensmeyer	169

PART IV. FACIES AND ARCHITECTURE

ANATOMY OF A GRAVELLY MEANDER LOBE IN THE SASKATCHEWAN RIVER NEAR NIPAWIN, CANADA J. E. Campbell and H. E. Hendry	179
THREE-DIMENSIONAL FACIES GEOMETRY IN PLEISTOCENE OUTWASH SEDIMENTS, WORCESTERSHIRE, U.K. M. R. Dawson and I. D. Bryant	191
COARSE-GRAINED LOW-SINUOSITY RIVER DEPOSITS: EXAMPLES FROM PLIO-PLEISTOCENE: VALDARNO BASIN, ITALY P. Billi, M. Magi and M. Sagri	197
SEDIMENTOLOGY OF THE WHITE CHANNEL GRAVELS, KLONDIKE AREA, YUKON TERRITORY: FLUVIAL DEPOSITS OF A CONFINED VALLEY S. R. Morison and F. J. Hein	205
SEDIMENTOLOGY OF VOLCANISM-INDUCED AGGRADATION IN FLUVIAL BASINS: EXAMPLES FROM THE PACIFIC NORTHWEST, U.S.A. G. A. Smith	217
CYCLICITY AND FACIES CHARACTERISTICS OF ALLUVIAL SEDIMENTS IN THE MONONGAHELA—DUNKARD GROUPS, CENTRAL WEST VIRGINIA S. K. Ghosh	229

PART V. TECTONIC INFLUENCES

ACTIVE TECTONIC CONTROL ON ALLUVIAL ARCHITECTURE	<i>J. Alexander and M. R. Leeder</i>	243
CONTRASTING ARCHITECTURE OF TWO ALLUVIAL SUITES IN DIFFERENT STRUCTURAL SETTINGS	<i>M. J. Kraus and L. T. Middleton</i>	253
FLUVIAL RESPONSE TO EOCENE TECTONISM, THE BRIDGER FORMATION, SOUTHERN WIND RIVER RANGE, WYOMING	<i>P. E. Groll and J. R. Steidtmann</i>	263
STRUCTURAL CONTROLS ON FLUVIAL DISTRIBUTARY SYSTEMS—THE LUNA SYSTEM, NORTHERN SPAIN	<i>G. J. Nichols</i>	269
FLUVIAL-SANDSTONE ARCHITECTURE AND THRUST-INDUCED SUBSIDENCE, NORTHERN GREEN RIVER BASIN, WYOMING	<i>M. W. Shuster and J. R. Steidtmann</i>	279
EVOLUTION OF DRAINAGE SYSTEMS IN RESPONSE TO ACADIAN DEFORMATION: THE DEVONIAN BATTERY POINT FORMATION, EASTERN CANADA	<i>D. A. Lawrence and B. P. J. Williams</i>	287

PART VI. ECONOMIC APPLICATIONS

EVOLUTION OF FLUVIAL STYLES IN THE EOCENE WASATCH FORMATION, POWDER RIVER BASIN, WYOMING	<i>P. D. Warwick and R. M. Flores</i>	303
TECTONIC CONTROL ON ALLUVIAL PALEOARCHITECTURE OF THE CRETACEOUS AND TERTIARY RATON BASIN, COLORADO AND NEW MEXICO	<i>R. M. Flores and C. L. Pillmore</i>	311
AN APPLICATION OF STATISTICAL MODELLING TO THE PREDICTION OF HYDROCARBON RECOVERY FACTORS IN FLUVIAL RESERVOIR SEQUENCES	<i>C. R. Fielding and R. C. Crane</i>	321
FLUVIAL SANDSTONE BODIES AS HYDROCARBON RESERVOIRS IN LAKE BASINS	<i>Y. Qui, P. Xue and J. Xiao</i>	329
FLUVIO-PALUDAL DEPOSITS IN LOWER KEKIKTUK FORMATION (MISSISSIPPIAN), ENDICOTT FIELD, NORTHEAST ALASKA	<i>J. Melvin</i>	343
NUMERICAL SIMULATION OF GOLD DISTRIBUTION IN THE WITWATERSRAND PLACERS	<i>M. Nami and C. S. James</i>	353
FACIES CHANGES FROM FLUVIAL CONGLOMERATE TO BRAIDED SANDSTONE OF THE EARLY PROTEROZOIC ELDORADO FORMATION, WELKOM GOLDFIELD, SOUTH AFRICA	<i>C. S. Kingsley</i>	359
INDEX	<i>J. N. Weaver</i>	371