# California Prehistory

## *Colonization, Culture, and Complexity*

EDITED BY
TERRY L. JONES AND KATHRYN A. KLAR

*Published in Cooperation with the*
*Society for California Archaeology*

A Division of
ROWMAN & LITTLEFIELD PUBLISHERS, INC.
*Lanham • New York • Toronto • Plymouth, UK*

AltaMira Press
A division of Rowman & Littlefield Publishers, Inc.
A wholly owned subsidiary of The Rowman & Littlefield Publishing Group, Inc.
4501 Forbes Boulevard, Suite 200, Lanham, MD 20706
www.altamirapress.com

Estover Road, Plymouth PL6 7PY, United Kingdom

Copyright © 2007 by AltaMira Press
First paperback edition 2010

*All rights reserved.* No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the publisher.

British Library Cataloguing in Publication Information Available

Library of Congress Cataloging-in-Publication Data

California prehistory : colonization, culture, and complexity / edited by Terry L. Jones and Kathryn A. Klar.
p. cm.
Includes bibliographical references and index.
1. Paleo-Indians—California. 2. California—Antiquities. I. Jones, Terry L. II. Klar, Kathryn.
E78.C15C297 2007
979.4'01—dc22

ISBN: 978-0-7591-0872-1 (cloth : alk. paper)
ISBN: 978-0-7591-1960-4 (pbk. : alk. paper)
ISBN: 978-0-7591-1374-9 (electronic)

2006034418

# Contents


List of Illustrations vii

Preface xi

Acknowledgments xiii

1. Archaeological Progress since 1984 1
*Michael J. Moratto and Joseph L. Chartkoff*

2. Late Pleistocene and Holocene Environments 11
*G. James West, Wallace Woolfenden, James A. Wanket, and R. Scott Anderson*

3. Postglacial Evolution of Coastal Environments 35
*Patricia M. Masters and Ivano W. Aiello*

4. One If by Land, Two If by Sea: Who Were the First Californians? 53
*Jon M. Erlandson, Torben C. Rick, Terry L. Jones, and Judith F. Porcasi*

5. Colonization Technologies: Fluted Projectile Points and the San Clemente Island Woodworking/Microblade Complex 63
*Michael F. Rondeau, Jim Cassidy, and Terry L. Jones*

6. Linguistic Prehistory 71
*Victor Golla*

7. Northwest California: Ancient Lifeways among Forested Mountains, Flowing Rivers, and Rocky Ocean Shores 83
*William R. Hildebrandt*

8. Punctuated Culture Change in the San Francisco Bay Area 99
*Randall Milliken, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson*

9. The Central Coast: A Midlatitude Milieu 125
*Terry L. Jones, Nathan E. Stevens, Deborah A. Jones, Richard T. Fitzgerald, and Mark G. Hylkema*

10. The Central Valley: A View from the Catbird's Seat 147
*Jeffrey S. Rosenthal, Gregory G. White, and Mark Q. Sutton*

11. Models Made of Glass: A Prehistory of Northeast California 165
*Kelly R. McGuire*

12. The Sierra Nevada: Archaeology in the Range of Light 177
*Kathleen L. Hull*

13. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges 191
*Michael A. Glassow, Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell*

14. Prehistory of the Southern Bight: Models for a New Millennium 215
*Brian F. Byrd and L. Mark Raab*

15. Advances in Understanding Mojave Desert Prehistory 229
*Mark Q. Sutton, Mark E. Basgall, Jill K. Gardner, and Mark W. Allen*

16. The Colorado Desert: Ancient Adaptations to Wetlands and Wastelands 247
*Jerry Schaefer and Don Laylander*

17. Prehistoric Material Conveyance 259
*Richard E. Hughes and Randall Milliken*

18. Rock Art in the Golden State: Pictographs and Petroglyphs, Portable and Panoramic 273
*Amy J. Gilreath*

19. Prehistoric Mitochondrial DNA and Population Movements 291
*Jason A. Eshleman and David Glenn Smith*

20. Colonization, Culture, and Complexity 299
*Terry L. Jones and Kathryn A. Klar*

References 317

Index of Sites 381

Index 383

About the Editors and Contributors 391

# Illustrations

**FIGURES**


1.1. California's Place in the Americas 5

2.1. Topographic/Geomorphic Regions of California 12

2.2. Generalized Global Surface Temperatures at Four (A – D) Timescales; (E) reconstructed northern hemisphere temperature variability 17

2.3. Jepson Regions (Hickman 1993) by Cismontane and Transmontane Division 18

2.4. Pollen Percentage Diagram for Major Taxa from Twin Lake, Klamath Mountains 20

2.5. North Coast Range Douglas Fir Pollen Percentages/Time from South (Lily Lake) to North 22

2.6. Pollen Percentage Diagram for Major Taxa from Core CL-73-5 Clear Lake, Lake County 23

2.7. Synthetic Diagram of Vegetation Change Since the LGM for the Sierra Nevada 28

2.8. Inferred Mojave Desert Vegetation History 32

3.1. Approximate Shoreline Locations for the LGM, 12,000 Years Ago, 10,000 Years Ago, and 5,000 Years Ago for Southern California 36

3.2. Sea Level During Postglacial Transgression with Stillstands Associated with the Younger Dryas, the Cold Event at 8,200 years ago, and the Past 6,000 years 37

3.3. Diagram of Valley Cutting During Lowered Sea Level ($t_2$-$t_3$) and Trapping of Sediment in Bays During Sea Level Rise ($t_4$-$t_5$) with a Generalized Sea Level Curve for Times t1-t5. 39

3.4. Earliest Pismo Clam Dates from Archaeological Sites Within Southern California Littoral Cells and Characteristic Wave Directions 41

3.5. Paleogeographic Reconstructions of the Monterey Bay Region (a) at the End of the Younger Dryas (ca. 12,000 years ago) and (b) During the Early Middle Holocene (ca. 8,000 years ago) 46

3.6. Paleogeographic Reconstructions of the San Francisco Bay and Point Reyes Areas (a) at the End of the Younger Dryas (ca. 12,000 years ago) and (b) During the Early Middle Holocene (ca. 8,000 years ago) 48

4.1. California Sites with Terminal Pleistocene/Early Holocene Radiocarbon Dates 56

5.1. Fluted Projectile Point Locations and the Eel Point Site (SCLI-43) 64

5.2. California Fluted Projectile Points 67

5.3. Assorted Tools from the Early Holocene Component at Eel Point 70

6.1. Oregon and California Athabaskan Subfamilies 72

6.2. California Algic Languages (Ritwan) 73

6.3. California Uto-Aztecan Groups (Numic, Takic, Tubatulabal) 74

6.4. Probable Origins and Movements of California Penutian Groups 76

6.5. Hokan Families and Isolates of the California Area 78

6.6. Unaffiliated Language Families of California 80

7.1. Approximate Location of Tribal Groups, Northwest California 85