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**Precolumbian Water Management: Ideology, Ritual, and Power.** Lisa J. Lucero and Barbara W. Fash, eds. Tucson: University of Arizona Press, 2006, 296 pp., 39 illustrations. \$55.00, cloth.

Karl Wittfogel's *Oriental Despotism* (1957) and Julian Steward's "Cultural Causality and Law" (1949, still a masterful paper) produced the Wittfogel-Steward hypothesis: large-scale irrigation is related both to despotic government and the evolution of the state. Unfortunately, after an initial flurry of research, scholars turned away from issues of water, retreating under the combined pressure of critiques of the hypothesis (even though it represented only one aspect of water management) and a general anthropological turn away from social evolution. The volume under review exemplifies a welcome return to the study of society and water.

Originating as a Society for American Archaeology symposium, the book's excellent papers focus on ancient Mesoamerica (eleven chapters) and the prehistoric U.S. Southwest (two chapters, which have a tagged-on feel). Vernon Scarborough, a major force in the renewed interest in hydrological systems, concludes with a useful synthesis of the Mesoamerican material. In contrast to earlier research, the papers cover not only canal irrigation but water management in general: dams, aqueducts, reservoirs, dikes, sewers, drainage systems, swamp reclamation, tunnel wells, raised fields, and the ritual, iconographic, and symbolic representations of these systems.

Chapter 1 (Cyphers, Hernández-Portilla, Varela-Gómez and Grégor-López) demonstrates the early development of intermingled concepts of "rulership, ancestry, water, and the underworld" among the Preclassic Olmec, themes that persisted throughout Mesoamerican prehistory. In Chapter 2, Cyphers and Zurita-Noguera analyze Olmec settlements to demonstrate that humid lowland environmental diversity facilitated social complexity: rivers for transportation, floodplains for aquatic resources and recession farming, and high ground for swidden cultivation.

Nichols and colleagues (Chapter 3) focus on the Central Mexican Formative; societies linked water, fertility, and political power and constructed pyramids on top of springs and caves. The authors propose that status rivalry stimulated agricultural innovation and that irrigation may have facilitated the production of status goods and patron-client ties. Unnecessarily difficult prose unfortunately mars this otherwise theoretically stimulating article. In Chapter 4, Valdés completes coverage of the Preclassic by exploring the "spectacular . . . water-management technology" of Kaminaljuyu (Guatemala).

Commencing the volume's discussion of the Classic, Dunning, Beach, and Luzzadder-Beach (Chapter 5) review geoarchaeological data on the lakes and *bajos* (large karst depressions) of the southern lowlands, important because the Maya built many large centers adjacent to the *bajos*. In Chapter 6, Kunen employs ethnographic data from Bali, especially Geertz's model of the theater-state, to speculate about the Maya: "Maya capitals, like Balinese ones, served as stages for the enactment of rituals that reproduced the cosmic order on earth" (p. 102). Lucero in Chapter 7 focuses on "water in Maya political and ritual life," especially

problems of seasonal water availability, which along with the distribution of agricultural land influenced settlement and political complexity. Like others in this volume, the author discusses water lily iconography, a symbol of Mayan royalty; because water lilies signal clean water, royalty may have been associated with water-cleansing rites. Combining iconographic and archaeological evidence, Fash and Davis-Salazar (Chapter 8) propose that water management in Copan was a core feature of social organization, partly mirrored in architecture: “the pyramids were . . . mountains that provided . . . communication with the gods . . . ; the courtyards . . . were the valleys . . . that collected runoff, thereby creating shallow, watery ponds” (p. 134). French, Stuart, and Morales (Chapter 9) conclude Classic coverage by using iconography, epigraphy, and archaeological data to examine Palenque, a Mayan center in which excess water (rather than too little) was the problem.

Carballal Staedtler and Flores Hernández discuss the Postclassic Basin of Mexico in Chapter 10; dams, dikes, bridges, chinampas, and causeways controlled salinity and provided fresh water and farmland—water management that was interrelated with sociopolitical organization and religion/ritual. In Chapter 11, Brown considers the significance of the lakes and cenotes (hydrologic sinkholes) around the Late Postclassic Mayan cultural capital of Mayapan.

The American Southwest is covered by Walker and McGahee in Chapter 12 (Casas Grandes water/ritual leaders controlled both the building and abandonment of the site) and by Snead in Chapter 13 (shrines and reservoirs in the pueblos of the northern Rio Grande mirrored the structure of the universe).

This excellent volume illuminates the importance of water management to understanding the past and, I hope, will stimulate research on the present as well as the past. The recent water war in Cochabamba, Bolivia, and impending threats of dire scarcity caused by global climate change herald water’s continued centrality to our lives and societies.

#### REFERENCES CITED

- Steward, Julian. 1949. Cultural causality and law: A trial formulation of the development of early civilizations. *American Anthropologist* 51:1–27.
- Wittfogel, Karl. 1957. *Oriental despotism: A comparative study of total power*. New Haven: Yale University Press.

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