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13), and songs without words (Chapter 14). Hinton notes that, "A single word in a California Indian language may have to be translated by a whole sentence in English" (p. 109). To demonstrate this, the author presents a word from Ishi's Yahi language: *pop-sta-k'au-ram*. This word translates into something like "He hit them straight on with his arrows from where he was hiding."

Chapters 15-18 concern some aspect of language and dominion. These chapters examine the origin of California tribal names (Chapter 15) and the relationship between the naming of the Digger Pine (*Pinus sabiniana*) and the derogatory treatment of the California Indians by the Americans of the nineteenth century (Chapter 16). Chapter 17 is an examination of the government's former attack on California Indian languages, while Chapter 18 discusses the Native American Language Act of 1990, which recognizes the right of Native Americans to use their native languages.

Chapters 19-22 are concerned with keeping the languages alive. Chapter 19 examines John Peabody Harrington and concludes with a discussion of how Harrington's data are being used to revitalize and transform contemporary California Indian cultures. In Chapter 20, Hinton examines California Indian "writing systems." The author looks at various systems for recording information, such as the use of *Dentalium* shell beads, knotted ropes and notched sticks, rock carvings, and calendar stones. Also discussed are contemporary methods of transcribing California Indian languages, such as by means of the International Phonetic Alphabet (IPA) or the phonetic alphabet known as "Unifon."

Chapter 21 discusses what is being done to keep the languages alive. Hinton describes a unique conference, held in Marin County in 1992, at which a number of California Indians met to discuss what could be done to save their languages. One of the recommendations that came out of the conference was to establish

master-apprentice language programs, the topic of the final chapter.

Flutes of Fire concludes with Chapter 22, in which Hinton describes the six master-apprentice language teams that have recently been established in California. The two members of each team are introduced and honored, and by the time we have reached this point in the book, we realize the great importance of their work. Each team meets regularly so that the master can instruct the apprentice and, in doing so, pass on an entire language from one generation to the next.

Flutes of Fire is a thorough and scholarly work, and yet it is readable too. For this reason, it will appeal to a wide audience, and, in its own way, help to improve the chances that the California Indian languages will survive to grace the next millennium.



Natural History of the Colorado Plateau and Great Basin. K. T. Harper, Larry L. St.

Clair, Kaye H. Thorne and Wilford M. Hess, eds. Niwot: University Press of Colorado, 1994, viii + 294 pp., 41 tables, 20 figures, \$27.50 (hard cover).

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Syntheses of numerous natural history fields have recently become available in both book and article format. Most syntheses have focused on either broad or regional geographic coverage of

a single discipline, or a group of closely related disciplines (e.g., Betancourt et al. 1990; Elias 1994) tied together by geographic area. *Natural History of the Colorado Plateau and Great Basin* covers a temporal and geographic range of disciplines. While the obvious assumption would be that the common thread is geography, as it has been in other recent synthetic works (e.g., Grayson 1993), interestingly it is the contrast in geographic areas that ties this book together. The papers, authored by a number of specialists, were explicitly assembled for a broad audience, particularly students and resource managers, and most of the chapters address their topics in language that makes the topic accessible to even the novice.

In approaching this volume as a natural history of the Colorado Plateau and Great Basin, it is natural to ask how the variety of topics, environments, and time spans included could possibly be handled fairly in such a tidy little book. The answer, of course, is that it is impossible to give even coverage to all aspects of natural history in both the Colorado Plateau and the Great Basin in a single volume. Fortunately, the authors do not even attempt to do so. Instead, only a few papers address both the Colorado Plateau and the Great Basin; others focus on only a part of the area. While this may prove disappointing to those readers looking for specific information for the areas not covered, I was relieved that the text had not been reduced to the level of synthesis that would have been required to achieve more even coverage.

A recurring theme throughout the book reveals the reason the editors included both the Great Basin and the Colorado Plateau. From the first sentence, they clearly contrast the two, and leave no room for doubt that they are not lumping them into a single geologic, geographic, or biogeographic entity. The contrast, they argue, is deeply rooted in the geologic evolution of the two areas, which has resulted in a greater diversity of environments in the Colorado Plateau

than that found in the Great Basin. The resultant topographic differences have affected the biota of the areas, and predictably, the biota of the Colorado Plateau is more diverse. Further, they note, more research effort has been expended in the Great Basin than in the Colorado Plateau. The result is that we know a great deal more about the natural history, past and present, of the Great Basin than we do about the Colorado Plateau.

Chapter 2, which is very concisely written by Morris and Stubben, lays the groundwork for the rest of the book. They describe the geologic origins of the Great Basin and Colorado Plateau and point out contrasts in the geologic structure and organization of the two areas that underlie the environmental contrasts. Their discussion is extremely well organized and referenced, but it is disappointing in its brevity. It is always good to leave a consumer wanting more; however, no mention is made of the age and development of the major mountain ranges. For example, as Petersen points out in Chapter 3, the Sierra Nevada has a strong influence on climate and biota of the Great Basin. A particularly useful part of Chapter 3 is the inclusion of addresses of state agencies from which geologic information can be acquired.

Petersen's treatment of the modern and Pleistocene climates of the arid west is a concise overview of the major components of weather systems and how they relate to climate. He defines complex concepts in few words and places them in global context, then summarizes what is currently known of Pleistocene climates from both a global and western U. S. perspective.

The chapters on biotic natural history begin with Grayson's discussion (Chapter 4) of the extinct late Pleistocene mammals of the Great Basin. Here we begin to see the narrowing of focus, temporally and geographically, that allows this book to maintain its size and quality yet address its purpose. Grayson discusses what we have learned about past Great Basin faunas,

noting that there are significant contrasts in our knowledge of Holocene (better than any other part of North America) and Pleistocene (not as well known) mammals. He attributes the difference to the greater level of research effort expended on archaeological studies in the Great Basin, from which the mammalian record is drawn as a by-product, as contrasted with the lesser number of paleontologists who have worked with late Pleistocene faunas from the Great Basin and the difficulties encountered in attempting to date the relevant materials. A brief descriptive review of the extinct late Pleistocene mammalian taxa and the sites in which they have been found is the focus of Grayson's chapter, with briefer reference to the debate about the timing and causes of extinction.

In Chapter 5, Wilde restricts his discussion of human prehistory to the western Great Basin, defined as the drainages of Great Basin pluvial lakes exclusive of Lake Bonneville. He summarizes what is known of the sequences of human occupation of the western Great Basin from the earliest records, through the time when people were adjusting to changing post-Pleistocene environments, and into the period of contact with Euroamerican cultures, concluding with a survey of models proposed to describe prehistoric sequences and adaptations. I had some difficulty with Wilde's statement that most models of western Great Basin prehistory are centered on valleys with relatively abundant wetland resources. The Shoshonean, Reese River, Owens Valley, Steens Mountain, and Desert Culture models describe mobile use of environmentally diverse tracts of land with seasonally variable resources. His points are well taken, however, that most foraging (explanatory) models of Great Basin adaptations are based on wetland resources and that future research is needed that focuses on foraging adaptations outside the rich wetland environments.

The short chapter by Young (Chapter 6) on the effects of livestock grazing on Great Basin

plant communities is material everyone should read. Most folks realize that even small disturbances of arid-environment biotas can produce profound effects, with slow recovery time. However, seldom do we get such a precise statement of the magnitude of the changes and details on the nature and probability of recovery for a specific disturbance of a particular aspect of the environment. The record of vegetation changes caused by grazing is the most readily available account of one of the impacts of Euroamerican settlement. Rather than failing to acknowledge it, we all need to recognize that similar impacts are occurring elsewhere in our environment, with no way of determining what will be entailed in recovery, if recovery is possible at all—a daunting realization at best.

As with the chapters on geology and climate, Jackson's chapter (No. 7) on the cultural geography of the Great Basin contrasts the developments of eastern and western Great Basin resources, politics, and economics that influenced the development of modern human communities. He points out that the unifying factors that characterize the Great Basin are aridity and the consequently fragile land, as well as the highly separated, dense population centers in a large area of otherwise low population densities. Jackson also traces the historical developments that led to the contrasting cultural differences so evident in Utah and Nevada.

I found the paper by Hamrick et al. (Chapter 8) on the genetic diversity of conifers in the Great Basin somewhat obtuse. They never provide the reader with the common names for the trees that are the focus of the paper (though they do for the seed-dispersing birds), nor do they provide an introduction to the nature of the genetic analysis performed. Their study is fascinating and their results important for understanding the biogeographic history of trees, but much of their paper will be incomprehensible to most readers because of the technical language. Using the recent biogeographic distribution of montane

conifers and reconstructions of past distributions based on macrofossils from woodrat middens, they make a series of predictions concerning how genetic variations within and among conifer populations should reflect post-Pleistocene dispersal of the trees. For example, Holocene-immigrant species should be less diverse in the Great Basin than in the Rocky Mountain mainland while Pleistocene relic species should show little difference from the mainland. In comparing the genetic similarity of conifers, Hamrick et al. found that, in contrast to their predictions, founding events do not affect the genetic structure of the populations, but post-colonization genetic drift does.

Sigler and Sigler's chapter (No. 9) on the fishes of the Great Basin, Nelson's discussion (Chapter 10) of the insects of the Great Basin and the Colorado Plateau, and Mead and Bell's survey (Chapter 12) of late Quaternary herpetofaunas are, delightfully, exactly what I anticipated reading when I picked up this book. Each provides an overview of the diversity of the faunal group that forms the focus of the chapter, followed by a discussion of the factors that affect their geographic distribution, and suggestions of areas that need further work. These three chapters will become widely cited references in future studies. Chapter 9 on fishes is the most comprehensive, providing a list of all the species reported in the Great Basin and the Colorado Plateau—past and present, indigenous and introduced—with annotations regarding ecology and history. There are actually two insect chapters. In the first (Chapter 10), Nelson discusses the distribution, diversity, ecological roles, and human-related impacts of selected insect groups. There is also some discussion of history and dispersal. In the second insect chapter (No. 11), Warren and Harper discuss elevational patterns in insect distributions and describe some mechanisms employed by insects in the arid west that allow them to survive in high and low elevation environmental extremes. War-

ren and Harper find that temperature is the limiting factor for most groups. The herpetofauna chapter by Mead and Bell has ties back to the earlier chapter on extinct Pleistocene mammals, picking up the thread of how little we really know about late Pleistocene vertebrates. The authors include the Colorado Plateau in their overview, but point out that, as with the mammals, there is very little known about the herpetofaunas of that area.

This book is not the last word in the natural history of either the Great Basin or the Colorado Plateau, past or present, nor does it pretend to be. Its major contribution is in its synthesis of a selection of natural history topics, relating what is already relatively well known and pointing out areas that need more attention. There are several typographical and editing errors, as well as two graphics that suffered in reduction to page size, but for the most part, the book is nicely produced in a bookshelf-accommodating size and reader-friendly format. The simple prose, broad range of coverage, and well-referenced treatment of all topics make this book both useful and enjoyable to read.

REFERENCES

- Betancourt, Julio L., Thomas R. Van Devender, and Paul S. Martin
1990 *Packrat Middens: The Last 40,000 Years of Biotic Change*. Tucson: University of Arizona Press.
- Elias, Scott A.
1994 *Quaternary Insects and Their Environments*. Washington: Smithsonian Institution Press.
- Grayson, Donald K.
1993 *The Desert's Past: A Natural Prehistory of the Great Basin*. Washington: Smithsonian Institution Press.

