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REVIEWS

The Portable Cosmos: Effigies, Ornaments, and Incised Stone from the Chumash Area. Georgia Lee. Socorro: Ballena Press Anthropological Papers No. 21. 114 pp.

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The Chumash of the Santa Barbara Channel region have long been famous for their pictographic rock art (Grant 1965; Heizer and Clewlow 1973), but they were also producers of numerous examples of portable art—what French prehistorians would describe as *art mobilier*. The designs used conveyed ritual and social information, and reflected the world view of the Chumash. Georgia Lee, a noted expert on Chumash art (Lee 1977), has both an anthropological and professional artistic background. Most recently, she has been conducting research on the rock art of Easter Island. She combines her extensive knowledge and practical experience with a lucid and stimulating writing style.

Chumash art was an integral part of everyday life. It was not relegated to the remote esoteric position of fine arts in our own culture. In fact, there was no distinction between fine and applied art.

Lee's monograph describes effigies, incised stones, shells, and bone; basketry designs; and inlay work. She demonstrates continuity through time, and relates portable art designs to those in Chumash mural art. Lee finds at least four categories of artistic expression: perceptual expression reflecting perception of the natural world, conceptual expression or "crisis art" reflecting abstract concept-

ualizations, aesthetic expression reflecting inherent artistic values in the artifact, and utilitarian expression related to the use of the object. Design elements in Chumash art are closely related to belief systems. These can be better understood by analyzing the underlying symbolism of the design elements. The book is mandatory reading for anyone interested in the prehistory or ethnography of California and primitive art in general.

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The Skeletal Biology of CA-ALA-342. Robert Jurmain, editor. Salinas: Coyote Press, 1983, \$5.00 (paper).

Reviewed by JUDY M. SUCHEY
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I was pleased to see that circumstances still permit the excavation, analysis, and publication of prehistoric skeletal samples in California. I found the examination of this volume especially rewarding given the current trends in California where the information

from many remains is lost to future generations.

In general, the volume is very good. It is a comprehensive analysis of one late prehistoric/protohistoric site in Central California. It appears that the skeletal remains were excavated with care as we find about half of the sample to be fragile subadults. Further, it appears that the skeletal remains were processed very carefully, avoiding water immersion and preservatives. The report is comprehensive and supplies the reader with much information concerning the remains and the techniques used to analyze them. For all of the above reasons, the limitations noted below can easily be corrected.

DEMOGRAPHIC ANALYSIS BY CANFIELD, GIRVEN, AND ELAHIAN

The sexing of subadults from fragmentary, archaeologically recovered remains is a questionable procedure. First, it is *bone age and dental age* which are to be compared, not cranial and postcranial age. The distinction is important. Going back to the original study (Hunt and Gleiser 1955), we see that bone age was derived from radiographic examination of the hand and wrist bones using standards based on individuals of known chronological age. This aging method is extremely accurate but even then the final sex determinations were less than 80 percent accurate. In the present analysis, subadult age was estimated focusing on Johnston's (1962) long bone length standards. This method is far less accurate since it is based on a prehistoric sample for which chronological ages are unknown, but estimated largely from *dental* data. Therefore, this attempt at sex determination is circular. Sex determination of subadults should not be attempted in this context; subsequent speculations on the sex ratio (heavily weighted toward males) are not warranted. Sex bias may well be due to errors in sex determinations as the circular pro-

cedure described above would favor the male sex.

Concerning adult age determination, Angel's modifications of pubic-symphysis morphology should be described in the volume. They are not listed and neither is Angel noted in the bibliography; there is no way for the reader to comprehend exactly what was done.

The significance of the pre-auricular sulcus observations might be reconsidered. The author appears to use Ubelaker (1978) where females are considered to have the trait "nearly always" and males seldom. Houghton's (1974) study would indicate that the presence or absence of the pre-auricular sulcus is not good for sex determination but that the presence of the special pitted variety is associated with pregnancy and can be used. What standards do the authors use for adult sex determination from long bone data? This is a crucial point because sexual dimorphism of long bones varies from population to population. The most appropriate data would be Dittrick's (1979) study of sexual dimorphism of the femur and humerus in Central California skeletal samples. In this study, sample sizes for Late Horizon sites approach 200. Some idea as to the weight of the given features for sex determination would be helpful. Certain of the features (pubic traits) are known to be highly reliable (over 95 percent), whereas traits such as the size and weight of the innominate are of questionable value in Central California where female pelvises are often robust, heavy, and have heavy muscle markings.

NONMETRIC TRAIT ANALYSIS BY SNYDER

Most nonmetric trait studies focus on adults. Many nonmetric trait frequencies change with age so the inclusion of immature individuals in this section is questionable. In particular, infants under two *cannot* be scored

positive for metopism. *All* infants in this category have the suture as a normal development. Metopism is the persistence of this trait into *adult life*. The problems of inclusion of subadults in other nonmetric trait analyses is not so clear cut.

I was quite surprised to find (p. 18) the following statement: "Suchey pooled samples of Native American crania from 20 different geographical areas of central California. Some areas required pooling from within a region to provide sufficient sampling for nonmetric analysis." In fact, one of the greatest values of my study was that I *refrained* from pooling! The majority of the samples in that study were derived from the burial area of a single archaeological site. Only three out of thirty samples can be considered pooled. One of my major conclusions (Suchey 1975: 123) is that "the practice of pooling skeletal material from several sites for biological distance studies is shown to be unwarranted."

STATURE ESTIMATION BY GLUCK DE LA LLATA

Problems in stature reconstruction are considered: 1) using methods to estimate length from fragmentary bones, and 2) selecting the most appropriate formula (when the available choices give widely different results). The long bone length data are included in this section so statures can be recalculated in the future when these methodological problems are resolved.

Sexing from long bone lengths is confusing and could well be omitted. What criteria were used? If this procedure is based solely on Breschini and Haversat's (1980) sample, the sample sizes are too small (all under 10) to be conclusive. Looking at Burial 3 we see that initial sex determination based on the pubic bone and a variety of other indicators led to a male determination. This *should* be an accurate sex assessment as the pubic bone alone produces 95-percent accur-

acy. It is confusing to bring into the discussion at a later time the possibility that this individual might be female because of long bone data; long bone data produce accuracy around 80 percent.

PALEOPATHOLOGY BY KRENTZ, TRENT, AND KNOTT

It would appear from this section that the remains have been thoroughly examined for pathology. Radiographic examination was employed and various diagnostic possibilities are suggested for the conditions. More photographs would have been nice but I can understand they may have been downplayed to keep the cost of the volume down or due to current political problems with osteological analysis.

To conclude, I find this volume a valuable contribution to California osteology and prehistory. Attention has been directed to technical problems in the analysis, mainly concerning the areas of age and sex determination. These are the basic data which will be used by others as comprehensive analyses of burial practices are attempted. Obtaining good age and sex estimates is of the utmost importance as we build toward broader goals in the discipline.

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Sarah Winnemucca of the Northern Paiutes.

Gae Whitney Canfield. Norman: University of Oklahoma Press, 1983, 306 pp., index, bibliography, notes, 39 illustrations, 20 maps, \$19.95 (cloth).

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Sarah Winnemucca Hopkins' own book, *Life Among the Paiutes: Their Wrongs and Claims*, privately printed in 1883, for which she received editorial and financial assistance from Mrs. Horace Mann and many other Boston society ladies, was one of the first and has been one of the most enduring ethnohistorical books written by an American Indian. In his "Notes on Shoshonean Ethnography," Professor Robert H. Lowie (1924) cited Sarah's book thirteen times. In my "Culture Element Distributions: Northern Paiute" (Stewart 1941), I cited her twenty times. It seems like no official report or scholarly study has been written in the last one hundred years about the Northern Paiute of

western Nevada and southeastern Oregon that does not make some references to Sarah.

She was born about 1844 into a family of Paiute at Pyramid Lake who were pushed forward by their fellow tribesmen or stepped forward to speak to the first strange Euro-Americans to reach Pyramid Lake and joined them as guides to California. John C. Fremont was the most famous of these strangers and Captain Truckee, Sarah's maternal grandfather, spent some time with him in California. Her father was called Chief Winnemucca, later Old Winnemucca to distinguish him from sons, grandsons, and nephews who carried on the tradition of leadership. They learned to speak English, which allowed them to talk to strangers.

Sarah's first stay in California was at age six, when her family worked in the cattle industry at Bonsall's Ferry across the San Joaquin River near Stockton. Before age thirteen, when Sarah was hired by Major W. M. Ormsby of Genoa, Nevada, to be companion to his daughter and work as maid, Sarah had spent several years in a Catholic school near Santa Clara, California. Thus, by chance of being of a leading Paiute family that encouraged friendship with non-Indians and her chance to live almost as one of the family with a wealthy civic leader, Sarah had both language and social skills upon which she built a most remarkable life. Her life experience until 1860, when Major Ormsby was killed by Pyramid Lake Paiute during an attack he led of an "army" of drunken miners from Virginia City against well-armed Paiutes, indicates that Sarah led a charmed and unique life for a "poor, ignorant, Digger Indian," as natives of Nevada were usually called.

It is not always clear whether Old Winnemucca alone developed a taste for pomp and circumstance, or whether Sarah guided him to it. He received a ceremonial visit at Pyramid Lake from James W. Nye, the first territorial governor.