

ing in Kachina ceremonies); excrement and divinity may be very close. But it is Luckert's assumption that the 17 texts from a single narrator somehow represent "Navajo coyote stories," and that the 21 stories in *Hopi Coyote Tales*, all heavily edited by the authors, similarly represent "Hopi," that particularly undermines the credibility of his stimulating analysis.

Palaeopathological and Palaeoepidemiological Study of Osseous Syphilis in Skulls of the Edo Period

Takao Suzuki

Tokyo: University of Tokyo Press (distributed by Columbia University Press), 1984. 48 pp. \$22.50 (cloth)

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Between 1495 and 1793, venereal syphilis appeared as a new and virulent disease that manifested itself as a primary lesion, the chancre, followed by severe secondary skin lesions, a sore throat, fever, joint pains and severe systemic symptoms. Within one or two years, gummatous skin and bone lesions developed. Ten or 20 years later, many patients developed vascular disease and central nervous system lesions, but these lesions were not recognized as part of the syphilitic process until the late 19th century. The relationship of central nervous system and vascular diseases to syphilis was not confirmed until serological tests were developed early in this century.

Probably in error, many writers have attributed the pandemic of venereal syphilis that began in 1793 and ravaged Europe for a century to Columbus's sailors. Although these sailors no doubt encountered pinta, the treponemal disease widely prevalent in the New World, medical historians disagree on whether the organism causing severe venereal syphilis (*Treponema pallidum*) was newly introduced in Europe from America, or represented a virulent mutation of the agent of American pinta (*T. carateum*) or of other treponemal diseases, yaws and non-venereal syphilis (*T. pertenue*) which were so widely prevalent in Africa, the Middle East, Central Asia and the South Pacific. Clinical descriptions from antiquity (Greece: lichens; Rome: mentagra) suggest that syphilis was present in ancient Europe, but that physicians had not distinguished it from leprosy and other skin diseases. Just as syphilis was said to be unknown or undescribed before 1493, so were most of the now known communicable diseases also undescribed at the time.

Several hypotheses exist to explain how syphilis reached Japan. One view is that the disease was carried by Portuguese sailors from Europe to India, then to Canton, China, and from there to Japan. The appearance of syphilis in Japan in AD 1512 was followed by the rapid spread of the disease in the populations of Kyoto and early Tokyo (Edo). However, evidence exists that a treponemal disease (probably yaws) existed in the South Pacific Islands, Central Asia and Australia before that time. Chinese documents of the eighth century mention a venereal disease resembling the clinical manifestations of primary and secondary syphilis, but, as with descriptions of pre-Columbian Europe, the accuracy of the diagnosis is disputable. Pinta is considered by some writers to have been brought to the Americas

from Asia at the time of the prehistoric Amerindian migrations over the Siberian-Alaskan land bridge.

This interesting monograph by Takao Suzuki contains material from his doctoral thesis on the occurrence of osseous syphilis in Japan during the Edo period (17th to 19th centuries). His findings provide new information about a serious disease that, in an earlier historic period, spread rapidly throughout the world and had an important medical and socio-cultural impact. According to historic records, the introduction of syphilis into Japan in AD 1512 represented the first exposure of the Japanese to a treponemal disease; no geographic or historic evidence exists for the presence of yaws, pinta or non-venereal syphilis in Japan before 1512. Suzuki's study, based mainly on the incidence of syphilitic bone lesions evidenced from the archaeology, anthropology and epidemiology of Japan of the Edo period, estimates from the prevalence of lesions of tertiary osseous syphilis that about 50 percent of the adult population of Edo Japan had venereal syphilis.

The evidence for syphilis used by Suzuki is based on characteristic bone changes in 923 skulls from six burial sites. Techniques used to examine the bones included roentgenologic, microscopic, histologic and macroscopic gross anatomic examinations, but the primary diagnosis and differential diagnosis of osseous syphilis was based on macroscopic examination. Differential diagnoses included non-specific suppurative periostitis and osteomyelitis, tuberculosis, Paget's disease, giant cell tumour, osteosarcoma and multiple myeloma. Sufficient historic data enabled Suzuki to classify the osseous material by age, sex and social class (military [samurai], agricultural, artisan and merchant), and to estimate the frequency of syphilitic bone lesions among them. The highest prevalence of cranial syphilis (9.9-11.5%) was found in skulls of common people from the Fukagawa area of Edo (the area of the red-light district). The lowest prevalence was found in the *bushi* or *hatamoto samurai* class (government officials) (3.5%). Suzuki suggests that social values and behaviour played an important role in this distribution. The *bushi* class was composed of well-educated, self-disciplined people operating under the Buddhist and Japanese code of noble ethics known as "*buishi-do*," who would control their sexual passions and remain monogamous. By contrast, the less educated or common people might not be so restricted in their sexual behaviour.

Suzuki's monograph represents a useful and interesting attempt to bring the techniques of paleopathology, epidemiology and elements of social history to the study of the extent of syphilis in earlier Japan. The methods and techniques of this fine book will be of value to paleopathologists, anthropologists and medical historians.

Sons and Seals: A Voyage to the Ice

Guy David Wright

St. John's: Institute of Social and Economic Research, Memorial University of Newfoundland, 1984. ix + 129 pp. \$9.95 (paper)

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The primary objective of *Sons and Seals* is to explain "what the seal hunt means to