A Palaeodemographic Model of Late Holocene Central Murray Aboriginal Society, Australia

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A recent palaeopathological study has indicated that prehistoric Aboriginal society in some parts of southeastern Australia was sedentary and supported large populations. This conclusion generally supports archaeological evidence that a period of socio-economic intensification took place over the last 2-3,000 years. Also, concurrent research has focused attention on the possibility of extensive reductions among Aboriginal populations of the area through the introduction of smallpox. This process took place at a very early stage of European colonisation and in regions yet to be explored. As a result, smallpox probably killed large numbers of Aborigens before Europeans knew what the size of indigenous populations were. With these factors in mind, this paper uses both empirically derived data and hypothetical reconstruction to formulate a model for the growth of the Aboriginal population of the central Murray in the late Holocene.

Introduction

In palaeopathological research the emphasis on mere description of disease has long given way to the wider interpretation of it being an indicator of past human lifestyles. In recent decades the role of palaeopathology has been one of discovery about the health and well-being of prehistoric populations in relation to changes in subsistence strategies, diet and human ecology. Moreover, it has provided data for making interpretations and inferences about past behavioural, demographic and cultural adaptations which almost certainly could not be made using non-biological data alone. These interpretations have led to a far greater understanding of palaeodemography, changes in socio-economic patterns, human evolution, palaeonutrition, prehistoric human ecology and social and biological adaptive strategies.

Recently I made a palaeopathological survey of the precontact health and stress patterns in Australian Aborigines (WEBB, 1984, 1985). A series of pathological skeletal conditions which indicated either systemic disease or the effects of acute or chronic stress were investigated. These conditions included non-specific and treponemal infection, trauma, osteoarthritis, and stress indicators such as Harris lines, criba orbitalia and dental hypoplasia.

Some of my findings were surprising. They showed that while Aboriginal people living in most parts of the continent were generally very healthy, those inhabiting a middle section of the Murray River, from about Kerang to Euston, showed unusually high frequencies of stress (Figure 1). This stress manifested itself in the form of criba orbitalia (anaemia), dental hypoplasia (stress in childhood), non-specific infection and osteoarthritis. These results were surprising for two reasons. First, the frequency of stress related conditions in people living in the central Murray was much greater than in those living elsewhere. Secondly, although the central Murray frequencies were not unusually high for...
some human societies, they were unusual for a population of hunter-gatherers (WEBB, 1985).

To explain these findings I suggested that the unusually high frequency of stress in the region stemmed mainly from the effects of lifestyle i.e. periods of malnourishment, demography (such as sedentism and population aggregation) and the environmental consequences of that demography on health and wellbeing. Concluding that the demography of the area was the main cause of stress among these people, I inferred that they