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SKELETAL ANALYSIS

A. INTRODUCTION

This chapter presents the results of the analysis of the human skeletal remains from the historic burials from Site 7S-F-68 in Sussex County, Delaware. The goals of the analysis were to characterize these skeletons with respect to such factors as age at death, sex, mortuary treatment, population affinity, stature, and evidence of pathological conditions such as disease, dental decay and loss, nutritional deficiencies, or traumatic injury. The sample consisted of human skeletal material from nine graves. The skeletons are referred to by the field number of the feature of each burial. Table 6 provides summary information, including age and sex, for the sample under study. Tables 7-11 provide additional information, including cranial, **postcranial**, and dental measurements, stature estimates based on postcranial metrics, and tooth wear scores for each individual. Definitions of technical terms which appear in boldface print on their first use in the text can be found in the appended glossary; diagrams labeled with the the names of all skeletal elements are presented as Figures 14 and 15.

Skeletal material from Site 7S-F-68 was brought to the Laboratory of Biological Anthropology at the University of Delaware directly from the field, in many cases still covered with soil matrix. All material was cleaned using soft brushes and dental instruments. When possible, reconstruction of broken bones was accomplished using Duco Cement. In order to determine which skeletal elements were present, and to check for duplication of parts, each skeleton was inventoried.

The following section describes the individual burials separately. For each one, an inventory of skeletal parts present and their condition of preservation is given, followed by an assessment of bony **pathology**, sex, age at death, cultural modifications (such as copper staining from shroud pins), population affinity, and stature (height) during life. Whenever possible, sex was determined using criteria established by Phenice (1969) for the medial portion of the pubic bone with secondary confirmation from other areas of the pelvis such as the sciatic notch, and preauricular region, and finally, from other skeletal elements such as the cranium and long bones. Age of juvenile individuals was estimated from dental eruption, epiphyseal fusion. and diaphyseal length, and for adults, from relative dental **attrition** (tooth wear), endocranial **suture** closure, and presence of degenerative changes such as **arthritis**. The **pubic symphysis** (the most accurate indicator of age in adults) was not sufficiently well preserved in any of the individuals from this site to use for estimating age. Measurements were made using sliding dial calipers, spreading calipers, a flexible tape, and a bone board following standard procedures outlined in Howells (1973) and Bass (1987).

Dental wear was scored using a system described by Smith (1984). Descriptions of skeletal pathology were made following terminology defined by Mann and Murphy (1990) and **dental caries** were identified visually following Koritzer (1977). Population affinity was made following Bass (1987), who summarized morphological features which have been found to be useful in distinguishing between populations, and following Giles and Elliot (1962), who provide **discriminant functions** for determining population affinity based on cranial metrics. Stature for each individual was estimated based on as many long bones as were sufficiently preserved to allow measurement. It is well known that the relationship of long bone length to stature shows population variation in humans. Because it is likely, based on the archaeological and historic context as well as the osteological evidence, that all individuals in this sample were of European

ancestry, stature was estimated using sex-appropriate regressions derived from American White populations and provided in Trotter (1970). Estimates of stature based on all available long bones for each individual are given in Table 11.