

LIBERAL ARTS

Exploration of Relatedness in Ancient Nubia through Cranial Non-Metrics

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This study uses discrete, also called non-metric, cranial traits to determine the ancestry of individuals who lived at the ancient site of Tombos (Sudan) during the New Kingdom (1400–1250 BCE) and the Third Intermediate and Napatan periods (1050–650 BCE). Discrete cranial traits, which are minor morphological variations in the skull, have been documented to have a strong genetic influence, according to Gertrud Hauser and Gian Franco De Stefano’s 1989 paper “Epigenetic Variants of the Human Skull,” and these traits are useful in examining the biological relatedness between individuals and groups. With these data, interactions between various ancient populations at Tombos, a key trade center in North Africa, are explored. During the New Kingdom period, the Egyptian empire expanded into and occupied their southern neighbor, Nubia. After the fall of the New Kingdom Egyptian empire, Nubia succeeded in ruling Egypt in the Napatan period. Did immigrant Egyptians or local Nubians direct this important point of control on the Nile River? Were the later inhabitants of Tombos the descendants of immigrant Egyptian colonists or local Nubians? To address these questions, 13 discrete traits were assessed in the crania of 110 New Kingdom and 35 Third Intermediate/Napatan individuals and compared with 20 samples from the Nile Valley region using the mean maximum distance equation. Results from this initial analysis suggest that Tombos was inhabited by a population that was more closely related to Nubians, rather than Egyptians, during the time periods under study. While continued research is warranted, these preliminary data indicate that local Nubians played important political roles during the Egyptian occupation in Nubia and subsequent time periods.

Research advisor Michele R. Buzon writes, “Understanding the processes involved in the development and maintenance of political relationships has relevance today as well as in the past. Emilie’s research provides a view into the biocultural dynamics of ancient groups who lived in the Nile Valley, suggesting that Nubian populations challenged the power of the Egyptian Empire.”

Unit 6 Locus 27 Pit G
Crania 2



Unit 6 Locus 41 Pit G
Crania 29



Example of a cranial non-metric feature, metopism. A suture extending from the glabella (nasal area) to the coronal suture. The top indicates the presence of the feature, the bottom shows the absence.

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