



Physical Anthropology Section – 2009

H22 Frequencies of Non-Metric Characteristics in Northern California Native Populations: Establishing a Foundation for Comparison

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After attending this presentation, attendees will gain a clear understanding of the frequencies of commonly utilized non-metric traits present in northern California Native Americans, and how these frequencies compare to published literature on other Native American populations and modern Latino populations.

This presentation will impact the forensic community by initiating the creation of new non-metric standards on large samples of modern and non-modern populations.

The goal of this presentation is to present a comparison of frequencies for commonly utilized non-metric traits in Northern California Native Americans, United States Latinos, and indigenous Guatemalans.

As forensic scientists we produce legal documents, the foundations of which must be based on empirical studies. Non-metric ancestry data are often included in these reports; however, these data are based on inadequate samples either due to sample size or population representation. Despite the fact that non-metric assessments are still common place in forensic case reports on Latino groups there is little basis for these assessments in the published literature. In effect, non-metric analyses conducted on these remains are based on frequencies founded on potentially non-similar populations.

Recently, the frequencies and utility of non-metric features associated with specific races/populations have been challenged (Hefner, AAFS abstract 2007). These studies suggest that forensic anthropologists cannot rely on older studies to provide accurate information on frequencies for certain populations such as Latinos and that the overall utility of non-metric data must be further investigated. This work demonstrates the need to make new standards on large samples of modern populations and to simultaneously investigate the utility of non-metric analysis. The research discussed in this presentation will contribute to this goal.

Members of each mentioned group were analyzed for 33 common non-metric traits as established by Rhine (1990). Two observers made all observations and were tested periodically throughout the analysis for inter-observer error in trait assignment. The Native Northern Californians represent both a spatial and temporal analysis of non-metric characteristics for the region. The United States Latino and Indigenous Guatemalan populations represent a modern forensic context. The

collected data was analyzed to develop an empirical, quantitative methodology for estimating the forensic significance of non-metric traits within these Asian stem groups and then compare them to previously reported frequencies.

From this presentation, the audience will take away a greater understanding of the empirical utility of non-metric analysis of traits in Prehistoric California Native American remains, indigenous Central American skeletal populations, and modern U.S. populations.

Non-Metrics, Ancestry, Standards