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Stature Variability in Prehistoric and Modern South Asian Populations: A Bio-Cultural Approach

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ABSTRACT Certain evolutionary adaptations manifested in human biological diversity may be expressed as body size and shape variables measurable by anthropometric procedures. Standing height, or stature, is the phenotypic feature examined in this study with respect to both ancient and living populations of South Asia. The problem investigated is to discern differences in stature in samples of extinct and extant populations in this part of the world and to account for these differences within an evolutionary model. Stature data for prehistoric populations were obtained from calculations of stature regression formulae based upon long bone length of skeletons. All prehistoric skeletons in the sample were recovered from well documented archaeological sites. For living populations, stature data were gathered from published anthropometric surveys. Stature values for males and females of adult subjects were not pooled, and statures were divided into arbitrary "height clauses". These data were plotted on maps, prehistoric and modern samples being sorted separately, as were values for sex analysis of these spatial and temporal distributions of stature suggests that ancient populations had somewhat greater stature than modern populations. It is hypothesized that the decreased stature of living South Asians, particularly those in urban and village socio-economic settings, may indicate an adaptive advantage under conditions of chronic protein deficiency, as well as exemplify a condition of relaxed natural selection where muscular-skeletal robusticity no longer plays the significant role that characterizes larger body mass and physical strength in ancient hunting-foraging communities.