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## Population Structure and the Patterns of Dermatoglyphic Variation in Andhra Pradesh, India

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**KEY WORDS** R-matrix analysis; finger ridge counts; Diverse castes; patterns of gene flow

**ABSTRACT** Patterns of dermatoglyphic variation have been studied among the Telugu populations of Andhra Pradesh, India, applying R-matrix analysis and the Relethford and Blangero (1990) extension of the Harpending and Ward (1982) model to the 22 quantitative finger dermatoglyphic variables- 20 finger ridge counts and total number of whorls and total number of loops on the fingers. The studied populations represent entire spectrum of socioeconomic variation in the state of Andhra Pradesh, including upper, middle and lower castes, and migrant alien population as well. The plots of group centroids on the first two scaled eigen vectors derived from the principal coordinate analysis of the R-matrix produce population configurations conforming with known ethnohistorical backgrounds. There is a high degree of consistency in the pattern of population relationships based on male and female samples, probably implying biological validity of the observed pattern. Plots of observed mean phenotypic variance versus the distance from the centroid of the populations suggest greater degree of external gene flow into the migrant population and relatively greater isolation of the upper caste.

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