## Morphology and Morphometry of *Purana* (Old) Villages: *Pidurangala*, *Thalkote*, *Nagalawewa and Diyakepilla* at Sigiriya Suburbs, Sri Lanka

K. M. Chandimal<sup>1</sup>, G. Adikari<sup>2</sup>, S.G. Yasawardene<sup>3</sup>

The present human population living in Sigiriya suburbs with the Purana surnames such as Aluthgedara, Gamagedara, Undiyagedara, Millagahagedara, Kongahagedara etc are considered as the Purana population whose ancestry could be traced back to the times of Sinhalese Kings of 5th Century A.D (1,450 YBP). The quantitative (morphometrical) and qualitative (morphological) anthropological traits of the Purana populations (n=313) representing Purana villages: Pidurangala, Thalkote, Nagalawewa and Diyakepilla at Sigiriya suburbs were investigated. The quantitative anthropological traits such as height, cranial index, facial index, nasal index and qualitative traits such as skin colour, hair type and colour etc of the Purana population revealed that the Purana populations living in these four villages' possess increased variations. Results analyzed by ANOVA showed higher variations of most of studied phenotypic characteristics (morphometrical) among Purana female populations living in four villages in Sigirya suburbs. Principle component analysis (PCA) confirmed that Purana male populations of Talkote and Diyakepilla are closer in terms of morphometrical characteristics while the inhabitants at *Pidurangala* and *Nagalaweva* are quite isolated from the rest of the population. In contrast to male population, PCA analysis of female populations living in four villages are morphometrically placed in different clusters. The gender, pedigree or caste system, geographical location and socioeconomic status have been identified as limiting factors for the extent of phenotypic divergence among the Purana population. When comparing the present findings and other documented studies based on morphological and morphometrical traits of population groups in Sri Lanka, the analysed percentage distribution of each blood groups (A, B, AB, O and Rh) of Sinhalese, Tamils, Muslims, Burgers and the *Purana* population showed that the *Purana* population was phenotypically different from the rest of Sri Lankans. The individual quantitative traits (stature, cranial length, cranial breadth, facial height, facial length etc) and qualitative anthropological traits (skin colour, hair type and colour) of the Purana population were observed to be different when compared with other Sri Lankans.

Keywords: Morphology, Morphomerty, Purana Population, Purana Villages

<sup>&</sup>lt;sup>1</sup> Department of Anatomy, Faculty of Medicine, Wayamba University of Sri Lanka

<sup>&</sup>lt;sup>2</sup> Postgraduate Institute of Archaeology, University of Kelaniya, Sri Lanka

<sup>&</sup>lt;sup>3</sup> Department of Anatomy, Faculty of Medical Sciences, University of Sri Jayewardenepura Sri Lank