

**A COMPARATIVE STUDY OF OCCLUSAL DIMENSIONS OF THE
MANDIBULAR MOLARS IN PREHISTORIC AND CONTEMPORARY
POPULATIONS IN SRI LANKA**

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The prehistoric population in Sri Lanka can be further subdivided into Paleolithic and Mesolithic. In Sri Lanka most of the skeletons and other tools that have been found in several excavation sites belong to the Mesolithic period or Iron Age. These Anatomically modern prehistoric humans in Sri Lanka are referred to as the "Balangoda man". A study was undertaken to compare the mesiodistal, buccolingual, and occlusal dimensions of the permanent molars of two prehistoric populations with those of contemporary population.

Fifteen skeletons of unknown sex and age have been unearthed from two different sites in Sri Lanka (six from Bellan Bendi Pallasse in the Sabaragamuwa Province and nine from Pallemalala in the Southern Province). Teeth consisted of 24 mandibular molars (12 first molars and 12 second molars) and 31 maxillary molars (19 first molars and 12 second molars). Teeth were selected for measurements only if they were morphologically normal and not noticeably affected by caries. Teeth with severe attrition were excluded. Following measurements were taken on molariform teeth of the skeletal remains: the mesiodistal and buccolingual crown diameters (MD and BL) of the maxillary and mandibular molars, MD and BL diameters of the trigonid and talonid (TRMD, TLMD, TRBL, TLBL) of the mandibular molars. All measurements were recorded to the nearest 0.01mm using a digital vernier caliper by one investigator. These values were then compared with the values established for the contemporary population.

Crown dimension values obtained for the two prehistoric populations were greater than those of contemporary population. Crown area values of mandibular molars and maxillary molars were larger in the prehistoric populations than in the contemporary population. Although there is a difference between the crown dimension values of the mandibular molars of the contemporary and prehistoric populations, whether these values were statistically significant or not was not established as the no of samples were smaller in the prehistoric populations. When compared with the contemporary population, crown index values were smaller in the mandibular molars of the prehistoric populations. TRA% was smaller in the prehistoric populations. Therefore, a greater reduction in size over the years during evolution was observed in TLA than TRA. The crown area may have got reduced, as the type of food consumed at present is much softer and refined comparing to coarse, fibrous food eaten by prehistoric people.