

**Where was the origin of carnelian beads/artifacts of antiquity found in Sri Lanka.**

Carnelian beads were often discovered in Sri Lankan archaeological sites. The excavation of Citadel of Anuradhapura unearthed many varieties of carnelian and agate beads. Most archaeologists are under the impression that carnelian was not found in Sri Lanka, but exported from countries like India (Gujarat). This study was undertaken to unravel that the material for making carnelian is freely available throughout the country and the process of making carnelian out of common chalcedony found in Sri Lanka is quite simple.

Alluvial chalcedony and agate are found in plenty during the course of gem mining. Since the material does not fetch a price it is discarded by the miners except for a few large stones which could be sold as ornamental stones. This material was found freely as alluvial pebbles in gem mines of Ratnapura, Nivithigala, Kahawatte and Patmadulla areas and local miners used to call it "Sewvandi". An in-situ occurrence of a partially microcrystalline variety of quartz was found at the lower levels of the Bogala graphite mine.

The diesel coloured material called "Sewvandi" in smaller sizes are freely available. Since it is very similar to the diesel coloured corundum variety of geuda, traders include some stones of this material mixed up with geuda for sale. Most of the time if this material were included during the process of corundum heat treatment it would melt and make the operation of extracting the burned corundum difficult. But if it is not melted then it turns into a beautiful red coloured carnelian. Therefore subjecting purely this material to heat treatment should be further experimented to find out the correct temperature needed for the colour enhancement. With the available facilities it is not possible to determine the exact temperature at which the change of colour takes place, but it was observed that stones treated to a temperature of approximately 1100°C had turned into an orange colour similar to common carnelian.

There is evidence to believe that the Pandukal people who had migrated from India were responsible for bead making in ancient Sri Lanka and they were also familiar with the heat treatment process. Some of the artifacts contain characteristic features to identify them as products manufactured in Sri Lanka. Therefore the conclusion would be that up to some percentage carnelian were produced and worked in Sri Lanka using our own material.