

Some aspects of pre-modern iron technology in Sri Lanka

H.G. Dayasisira
Research Student Fellow
Institute of Fundamental Studies
Kandy

Iron production in Sri Lanka dates back to the 9th century B.C. Having reached specialized levels by the 3rd century B.C., this industry persisted until the Pre-modern Period. The citadel of Anuradhapura, Mantai, Tissamaharama and Kantarodai are some important habitation sites yielding metal industrial remains of the past. More recently, Alakolawewa (near Sigiriya) and Samanalawewa (in the Upper Walawe basin) yielded large-scale metallurgical operations of the Early Historic and Historical Periods. Although slag heaps and other remains of iron smelting operations have been found in many parts of Sri Lanka, archeological field explorations and excavations from metallurgical remains have been done at only a few sites. More recently large-scale metal smelting sites have been unearthed at Tissamaharama and Ridiyagama.

The study of resources and technologies used by past societies is being done by the Ancient Materials: Sources, Use and Technology Project at the Institute of Fundamental Studies with special reference to metal technology and resource use. The processes of iron smelting, steel production, and forging all used mineral and non-mineral resources including both flora and fauna. Charcoal production methods, and wooden plank and leather production methods for bellows are being studied. Ethnographic studies have identified about 30 types of wood used for charcoal-making during the recent past. According to these studies, the most commonly used iron ores in Sri Lanka were goethite, limonite and hematite. Alakolawewa and Ridiyagama findings probably indicate the use of magnetite as well.

Because the literary evidence related to ancient resource use patterns and to the technology of the iron industry are rare in Sri Lanka, many more ethnoarchaeological and archaeological explorations, excavations and laboratory analyses are required.