Patrons

Prof. D.M. Semasinghe 
Vice Chancellor, University of Kelaniya.

Prof. Lakshman Seneviratne
Deputy Vice Chancellor, University of Kelaniya.

Board of Advisors

Prof. Ariyarathne Jayamaha
Dean, Faculty of Graduate Studies, University of Kelaniya.

Prof. A.H.M.H. Abayarathna
Dean, Faculty of Social Sciences, University of Kelaniya.

Prof. Patrick Ratnayake
Dean, Faculty of Humanities, University of Kelaniya.

Board of Editorial Consultants

Prof. Dr. Jagaralankara
Dhammaduta Chekinda University, Yangon, Myanmar.

Dr. T. R. Premathilake
Director, Postgraduate Institute of Archaeology, University of Kelaniya, Sri Lanka.

Dr. Sonia Jasrotia
ICCR Visiting Professor, Preah Sihanauk Raja Buddhist University, Cambodia.

Prof. W. A. Weerasuriya
Department of Library and Information Science, University of Kelaniya, Sri Lanka.

Dr. Simmee Oupra
Faculty of Humanities, Chiang Rai Rajabhat University, Chiang Rai, Thailand.

Prof. M. M. K. Weerasinghe
Department of Library and Information Science, University of Kelaniya, Sri Lanka.

Prof. Mapa Thilakarathna
Department of Mass Communication, University of Kelaniya, Sri Lanka.

Dr. Kiran Shahid Siddiqui
Taxila Institute of Asian Civilizations, TIAC Quaid-i-Azam University, Islamabad, Pakistan.

Prof. Malinga Amarasinghe
Department of Archaeology, University of Kelaniya, Sri Lanka.

Mr. Lauw Acep
Principal, Nalanda Buddhist College, Indonesia.

Prof. Atul Tripathi
Banaras Hindu University, Varanasi, India.

Prof. Mala Malla
Tribhuvan University, Kathmandu, Nepal.

Prof. Shahnaj Husne Jahan
University of Liberal Arts, Dhaka, Bangladesh.

Editor-in-Chief

Prof. Anura Manatunga
Director, Centre for Heritage Studies, University of Kelaniya.
Preface

The Journal of the Centre for Heritage Studies, University of Kelaniya is one of the two annual publications of the Centre. The sister publication is in the Sinhala medium and it is named as “Yugathara” which means in between eras. The present journal has not been given a specific name though its main focus is also into studies in between eras. In fact, one may broadly translate it as “In between the past and the present era”.

We would like to reproduce rare manuscripts, documents, indexes and catalogues in our future journals along with critical research papers. In accordance with its themes and the scope of the Centre for Heritage Studies, University of Kelaniya, the journal contains research papers on heritage related topics and can be considered a representation of research studies which explore various issues that characterize the changing cultural and heritage landscape of our times. When we compiled articles for this journal, we were fortunate to read and edit articles on a wide range of topics, which we received from both national and international scholars representing diverse and vibrant academic communities. It is the genuine interest and commitment we witnessed in the scholars that motivated us to overcome the challenges we encountered in publishing this journal. We are grateful to all those who sent in their articles and for the research done. It is our sincere hope that this journal will contribute to develop more interest in cultural studies particularly in the field of heritage, promoting a nuanced understanding of the value of our own heritage.

Editors,
Journal of the Centre for Heritage Studies.
Content

Role of Information Technology in Preservation of Cultural Heritage .............................. 1
Arundathie Abeysinghe & Aditya Abeysinghe

Winged Animals: Mediator between Celestial and Terrestrial World ......................... 7
Swati Mondal Adhikari

Legacy of “Sri Lankan Cricket” Portrayed through “Chinaman” .............................. 19
D.A.G. Ariyasinghe & P.A.S.A. Ariyarithna

Dharmarajika Stupa: A Great Buddhist Heritage of Taxila (Pakistan) ....................... 35
Nighat Aslam & Mastoor Fatima Bukhari

Indo-Thai Vai Vai- A Soft Song from West......................................................... 49
Nachiketa Bandyopadhyay

Buddhism in Uttarakhand: Monuments from Past and Present ............................... 67
Alka Barthwal

Stone Age Archaeology in Bam Locality of Indian Siwalik Hills, Bilaspur District of Himachal Pradesh ............................................................. 77
Worrel Kumar Bain

Idea and Status about Conservation for Organic Cultural Relics in Sri Lanka
(Palm Leaf Manuscripts) .................................................................................... 113
P.R Asanka Buddikasiri & A.K. Rangika Madhumali

Bulls, Bullocks and Bullock-Carts: Masculinity, Transport and Trade in Protohistoric and Historic South Asia ................................................................. 121
Kurush F Dalal & Raamesh Gowri Raghavan

Silk Heritage of Assam and Genesis of Ahimsa Silk ............................................. 149
Anosuya Das

Art in the Ancient Water Management System of Sri Lanka .................................. 155
Piyumi Embuldeniya

Sattram Heritage Maintained by Celibate Devotees with Special Reference to Auniati Sattras and Uttar Kamalabari Sattras ......................................................... 171
Gitanjali Goswami & Mousumi Sarma
Tai Phake community and their Heritage of Trade and Commerce
(Special Reference to Namphake Village of Assam) .......................................................... 171
Hiranmayee Das Gogoi

Categories of Dance in Sri Lanka during Anuradhapura and Polonnaruwa Periods:
An Archaeological Study Based on Dancing Figures.......................................................... 177
Koshalee Kakulandala & Chandima Bogahawatta

Protectcting the Last Trumpet of Sinharaja World Heritage:
A Pre-Reading of a Sinharaja Devoid of Elephants......................................................... 189
M.S.M.L. Karunaratne

Raja - The Maligawa Tusker................................................................................................. 209
Chamalka Kothalawala

Inscriptionsal Evidence on Health Sector Administration in Ancient Sri Lanka............. 217
I. G. P. R. Kulanatha

Medieval Terracotta Horse Figurines from Mundra Taluka, Kachchh District, Gujarat,
India ......................................................................................................................................... 229
Kumbodharan S., Rajesh S. V., Abhayan G. S., Bhanu Prakash Sharma

Indian Carpets in the Accounts of Foreign Travellers ...................................................... 241
Somayye Keighobadi Lemjiri

Administration of Heritage Sattra Institution of Assam: A Study on Monastic Sattras
of Assam ................................................................................................................................ 251
Tulashi Rajkhowa

Chittoor Megaliths – A Unique Megalithic Cultural Tradition in Rayalaseema Region-
Andhra Pradesh..................................................................................................................... 261
V. Ramabrahmam

Preservation of Films as Cultural Heritage of a Nation
(Special Reference to Sri Lankan Film Industry) ............................................................... 267
Ileka Ruwanpathirana

Therīgāthā: A Masterpiece of Women's Perspectives in Buddhism ............................ 281
Renu Shukla

Land Cover Changes Occurred in Sinharaja Buffer Zone during the Period of 1986-2016
(A Spatial and Socio Economic Analysis: Based on Kudawa Village)......................... 291
Thanura Madusanka Silva, D.S.R.E.S. Gunawardhana,
Tharindu Madhushan Peris
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Grains Storage Practices of Chettiar Community in Tamil Nadu with Special Reference to Sivaganga District</td>
<td>S. Udayakumar</td>
<td>305</td>
</tr>
<tr>
<td>Traditional Techniques of Gold Jewellery: A Case Study of Devakottai, Tamil Nadu</td>
<td>S. Udayakumar &amp; Prof. Sharada Srinivasan</td>
<td>313</td>
</tr>
<tr>
<td>Human-Elephant Relationship in Ancient Sri Lanka from Anuradhapura Period to Kandy Period</td>
<td>P. A. Niroshani Udayakumari</td>
<td>321</td>
</tr>
<tr>
<td>Administration of the Udugampola Sub-Kingdom: A Historical and Archaeological Legacy</td>
<td>Dinithi Wijesuriya</td>
<td>353</td>
</tr>
<tr>
<td>A Book Review: Dasabodhisattuppattikathā Aṭṭhakathā</td>
<td>Vijitha Kumara</td>
<td>361</td>
</tr>
</tbody>
</table>
Traditional Grains Storage Practices of Chettiar Community in Tamil Nadu with Special Reference to Sivaganga District

S. Udayakumar
Post-Doctoral Associate, School of Humanities, National Institute of Advance Studies, Indian Institute of Science Campus, Bangalore- 560012
archaeology1987@gmail.com

Abstract

The study was conducted at the village and the town of Sivagangai, Karikudi and Devakottai and of Tamil Nadu with an aim to document the storage practices adopted by Chettiar community. The study has been done by author through direct communication and gone through the materials which is used for storage purpose. In this paper the information gathered by caste of Chettiar community in Sivaganga district. The main purpose was to understand the storage practices through the generation of community and advantage of storage and to know how the storage practices balance their environment and stay long years.

Keywords: Traditional, Karikudi, Chettiar community

Introduction

The traditional knowledge of grains storage practices was evolved through generation to generation by oral and practical knowledge. The traditional storage practices still continue because of their social culture and environment. Certain practices are unique to a given culture of society and vary between countries, region, village and even community (Karthikeyan C, 2009). Basically the Chettiar community is high in social-economic statues. They are also known as trades, they do export and import business of grains, vegetables, gold, etc. most of storage materials are in metals and wooden. This community used to store in their home for safe. Chettiar community buys grains from farmers in a large-scale and they store. Proper storage of food grains is necessary to prevent spoilage, increasing keeping quality and for monetary reasons. The practices of using natural source for storage of various household items go back to the early period of known history (Karthikeyan C, 2009). The storage knowledge refers to the unique tradition, local knowledge existing within and developed around a particular geographic area (Karthikeyan C, 2006). The main purpose for storage practices to against the attack of insect, safe and steady supply of high quality of food. Certain practices are unique to a given culture of a particular society. The main purpose for storage practices to against the attack of insect, safe and steady supply of high quality of food. (Karthikeyan C, 2009, Shobha Nagnur, 2006). At present, the residue analysis gives information of products stored in a storage container. Hence the present study was undertaken to document the storage practices adopted by the Chettiar community in Tamil Nadu.
**Introduction of Chettiyar community**

There is information about trade and commerce during early period in Tamil Nadu. There is evidence in literary and archaeological, which has thrown a light on trade in early period of Tamil Nadu. The literary source of trading community in early Tamil Nadu is found in ancient text *Pattinapalai* (Jayasurya.R, 2008)

Archaeological evidence gives information about the trade practices in Tamil Nadu in excavation in Korkai, Arikkmedu. There is information about the forging trade between Tamil country and Rome. Numismatic evidence from Arikkmedu gives information of Tamil Nadu plays an important role in trade and commerce. In the early period of Tamil Nadu trader communities were the most organized on powerful guilds and corporative. Trader community was called as Chetti or Chettiar. In ancient Tamil literary *Silapaddilarm* they were called as Aratter or Cheet (Jayasurya.R, 2008)

Basically the Chettiar community traded with grains, Jewelers with Rome and local people. They still continue the trading practices which were their family business. In Tamil Nadu they knew trading from beginning. The caste name “chetti” particularly applied to the trader or merchant class is sought to be derived from Sanskrit word, *sreshti* or vice versa, the term chetti occurs as far as first time in *Manimekalai*. It might have emerged from Tamil word Chetti meaning trade, as is shown from the fact that the Chettiar community is described in registered document even today as belonging to the Chetti community (Jayasurya.R, 2008). Chettiar had thrown a light of their trade in Burma and also international finance.

**Study Area**

The study was conducted in Chettiar community of Tamil Nadu. A survey was done in Karakudi and Devakottai in Sivaganga district of Tamil Nadu. In Sivaganga district the population of Chettiar community high in Tamil Nadu this community based on trade and they does trade of exports and import of grains from ancient times. In Sivaganga the chattier communities is high in economic statues. They construct the storage container in their houses (Fig. 1).

**Methodology**

The present study was undertaken to know the ancient storage practices of chattier community. The study has documented the materials has used for storage system. The study has gone through direct interviews of more than ten houses of each village of Chettiar community. The photography was done of materials of storage practices and library work was also done.
Aims and objects

The main aim of the study was to understand tradition knowledge of storage practices through over generation to generation of Chettiar community, to enclose the materials of storage structure made from what is locally available and to understand the container made out of materials and to understand the shapes and size of grains storage container and to know the container of storage are made depends upon climate and the rainfall. The study aims to understand the scientific approach of storage practices and to know the mixture of natural source of grains to safe the grains from insect and climate condition and to know the storage container are available locally and transport. The present study encloses the major aspects of traditional storage grains practices of Chettiar community.

Grains storage structure

The main purpose of making storage structures is to save the grains from insects and climate condition. The storage structures are always built according to the climate condition and the materials which are used for storage structures are mostly made out of what is locally available. The storage structures always build near or inside their houses and there will be scientific reasons behind the structure. The Chettiar community is well-known for making storage structures. The storage structure is easy and friendly.

Kanajal/Paddy storage

Basically Kanajal type of storage made out of bamboo and shape of kanajal is cylindrical. The height always varies according to quantity of storage paddy. The Kanajal is plastered with red mud and cow dung mixture to prevent spillage and pilferage of grains (Shobha Nagnur, 2006). The top of the Kanajal is plastered with red mud and cow dung. The main purpose is to store the paddy which should not be affected from insects and to keep paddy for a long time for trade or house purpose. In top of Kanajal there will be an opening to take out the paddy whenever their required.

Kothi

It is a room constructed with large door for pouring grains. Kothi is mainly made for rice and paddy. This is made up of brick and it’s plastered with cow dung. A small outlet is kept for taking out the grains, when they are required. This kind of storage can be seen in all Chettiar houses. This is built from large quantities of grains which are grown and used for trade purposes. This Kothi is always structured near kitchen.

Anjarapettai

These are made up of wooden or brass, this storage container are unique all Chettiar houses. It is basically made for house purposes which can store small quantity of grains for weekly cooking purpose. Its round shape looks like a recent tiffin box and inside the
box there will be five small bowls in which the grains can be stored. Each bowl contains around 100 grams of grains. In Tamil language “Anjaru” means five, so it is called Anjarapettai. The main purpose is to store grains in Anjarapettai. It is friendly for cooking women and it is easier to remember. Anjarapettai is made artistically.

Kudam

Basically kudam means water storage, but it is also used for grains and it is made up of copper or brass, the weight of copper Kudam more than five kg. Kudam is in a bigger size so it can store a large quantity of grains. Kudam storage can be seen in all Chettiar houses. Kudam is used for storing rice for household purposes. (Fig. 2).

Hagevu

This is an underground structure which is used for storage purposes. It is a simple, dug out pit lined with straw ropes to prevent damage due to moisture. Basically Hagevu is constructed using bricks but sometimes it is also built with stone as an indoor structure. (Shobha Nagnur, 2006). After filling the grains to its capacity on top of Hagevu, it is sealed with red mud plaster and the top there will be a small opening structure like square or circular to take out grains whenever required. The advance of this kind of structure that grains can be stored without damage from insects and moulds for a longer period and it saves space for storage. (Shobha Nagnur, 2006). At same time not suitable for seeds. This kind of storage structure is suitable for dry agro climatic.

Utrani

These are pots used for storing small quantity of grains (Shobha Nagnur, 2006). Utrani are made up of mud pot which available in locally. There are different shapes and size, they are basically round in shapes and size differ according to grains storage. Sometimes utrani used arrange from size basically big size of utrani used to keep in platform from that it start began small. The thickness of the pot is very strong and a single person cannot lift it. This is basically used to protect grains from insect and rats. Utrani has always been kept in the corner of a wall (Fig: 3).

Traditional storage practices

Storage practices began at domestic level and many people at domestic level use natural sources for storage purpose. (Shobha Nagnur, 2006). The storage practices evolved with an error and fallers. Storage practices began with farmers and it continuous with the traders. The main reason is to continue storage practices is that it is an ecofriendly method.
**Pulse storage**

There are a few methods to prevent Pulses from insects and climate condition, the first method is the storage of pluses with Naithulasi (*ocimum sp.*) and chili (*capsicum annuum Linn.*) After harvesting, a pulse has to be dried in the sun for two days and then it has to be packed new jute gunny bag with Naithulasi and chili. (Karthikeyan C, 2006). The strong odour of Naithulasi and strong smell of chili, the pulses are safe from insects. Nearly, 65% Chettiar in sivaganga, karikudi and devakottai had adopted this method. This method is cheap and effective to prevent and self-life of the stored pulse grains increased up to two years. (Karthikeyan C, 2006).

The next method is that pulses are stored in an earthen mud pot for the safe storage of grains and seeds were filled in earthen pot to its 3/4th volume and then remaining 1/4th top was covered with ash (wood, cow dung ash) and by this way, a wide range of storage pests like pulse battles and fig moth were kept under control for a period of 6-8 month. After 6 months, it has to be exposed to sun and then the ash was spread above the grains surface and kept for storage (Karthikeyan C, 2009). A recent method of storage pulses practices is that Neem leaves mix with the pulses in gunny bags while storage. Nearly 40% traders of Chettiar in sivaganga, karikudi and devakottai had adopted this method. There is another method such as storage of pulses with sand, mixing of pulses with coconut oil before storage, frying of pulses grains. Basically these methods done with locally available materials and there are cheaper and more effective to prevent the grains from insect and climatic condition.

**Paddy storage**

The farmers and traders face a lot of problems to save grains against rodents, pest’s disease and insects. In the case of paddy and rice, they face several problems. Basically traders stored the paddy grains in earth pots and placed paddy husk in top layer (5cm) above it (Karthikeyan C, 2009).

First they made mud pots of different size, shape and capacity with red clay mixture of river sand, the clay always taken from the river bed which is fine quality. Before the storage of grains in mud pot, the grains have dried in sun light for two days. Before the storage of grains the pot has been cleaned properly and there should be liquid such as oil and water. The mud pot placed a circular ring like structure locally called “Pirimanai” made of paddy Straw on the floor (Karthikeyan C, 2009). Above that ring they placed the pot filled with grains. The pot was arranged one above the other and the top most pot was closed with a lid. Basically the mud pot kept a corner place which gives support to pot. The seed or grains materials stored in the mud pot were kept safe away from wide range of storage pets for nearly 6months, after six the grains have taken from mud pot it has to be dried in sun. (Karthikeyan C, 2009).
Cereals Storage

This method was being practiced for more than 40-50 years in Chettiar community and also local famers. The storing grains with sweet flag (*Acorus Calamus*) (Karthikeyan C, 2009). In this method, sweet flag has to be in power and mixed with the grains and cereals, and oil seeds. In this method 1kg of grains, about 10grms of sweet flag powered has to mix. The grains could be stored effectively for 6-7 month without any pest attack. (Karthikeyan C, 2009). Another method was adopted by traders, the cereal has to be mix with the neem leaves and cow dung ash, stored in gunny bags.

Rice Storage

From the Ancient times the rice played a major role among grains storage. But will be affected very soon due to rain and insects. Traders always store rice in *kothi* because the quantity is high. At the same time, for house purposes, the rice was stored in *Utrani*. Basically after harvesting the rice, it has to be died for two days in sun light. After that rice has to be mixed with neem leaves or salt which will not affect the rice. Another method is the turmeric and garlic has to be mixed with the rice grains.

Basically neem leaves give a more effective smell to attack insect and accordingly scientific turmeric is anti-biotic medicine.

Dhal

In the case of Dhal, it has to dry in sun light for two days and then it has to be roasted, cooled and stored in air tight boxes. Dhal are put in cotton bags and kept in large storage structure like bamboo structure, where large quantities of grains are stored (Shobha Nagnur, 2006).

Observation

As per author, the study of the traditional knowledge was known to Chettiar community from generation to generation. The traditional knowledge used by Chettiar community to make the grains living in a particular environment and in a valuable resource for scientific development to introduce the storage system to increase a storage loss, as these varieties are usually susceptible to insect damage. Most of the grains storage used for house hold and trade purpose. Ancestors adopted the different storage of grains in different container according to their suitable form. Mix the natural source with the grains for prevents the grains.

Basically they used locally available materials to storage such red mud, grass, cow dung to plaster. They used materials which use a scientific approach and it gives evidence for archaeological record, which help to know the past practices of storage knowledge. Chettiar community uses grains container in copper, brass and pots in different shapes.
and size according to the quantity of grains, through this concussed, can identify that Chettiar community play an important economic role.

Acknowledgement

I am grateful to Deccan college library, to complete this paper. Prof. V.S.Shinde allowed working on this topic.

References


