

## The methods of subsistence of the Prehistoric people in the Sigiriya Dambulla region

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### Introduction

Any group of people or tribe living in any country or region follow an economic pattern or a mixture of patterns specific to them. This could be one deliberately built by the people or that evolved naturally. In an economic pattern built up in this manner features developed in different ways can be identified. This can develop in a continent or a sub continent or an



Fig 01. Prehistoric site map in Sigiriya- Dambulla region

Island in different ways. The aim of this paper is to study the factors that affected the economy of the prehistoric people in Sri Lanka, which is an Island. Views on the prehistoric people in Sri Lanka, which is an Island close to the India sub-continent in the continent of Asia, have been presented several years before the present time (Deraniyagala 1992). According to the dating available in prehistoric studies the existence of the prehistoric man ranges from about 125 000 BC to about 1800 BC. Hence it is very difficult to study the economic pattern of the people over such a wide range. Further it belongs to a different field of research. Therefore what has been

attempted here is to review such research and analyze the economic pattern of the people in the Sigiriya Dambulla-region. It is discussed here under three topics. They are the subsistence patterns, the shelter patterns and the demography.

It is believed that it could be possible to find similarities and differences between the remains in the Wet zone caves such as Batadombalena, Beilena etc. and the dry zone caves around Sigiriya such as Potana and Aligala having analyzed them from a statistical point of view (fig 01).

According to the manner of location and the content of the caves, the wet zone caves (Batadombalena, Beilena and Fahiengala) and the dry zone caves, (Potana and Aligala) can be identified as home bases or camp sites. But it is doubtful whether the Pleistocene sites mentioned above were butchery sites. However it could be shown that these caves

were permanent settlements (Isaac 1978, Perper et al 1979) (fig 02).



Fig: 02. Prehistoric site map in Sri Lanka, Dry zone & wet Zone

But so far no systematic analysis has been done of their catchments area. However remains exposed through excavation have been subject to analysis. The density of fauna distribution and the meat weight of animals have been calculated according to the opinions of archaeologists who studied the fauna of Sri Lanka. If this is used as an indicator it is possible to present some idea of the subsistence pattern and how it was maintained by the cave dwellers. Some ideas have been presented based on faunal remains from these caves and other places (Deraniyagala 1992). Therefore they could be determined as in the table below (fig 03).

Though this is the general pattern, there is a tendency for the numbers of animals to vary according to the regions and the type of animals. But hardly any studies have been done on Zoo- Geography. Therefore in these fields there are many shortcomings. Though it is possible to estimate numbers according to identifiable parts of animals a large quantity of unidentified animals remain. To identify them it is necessary to launch a pilot programme.

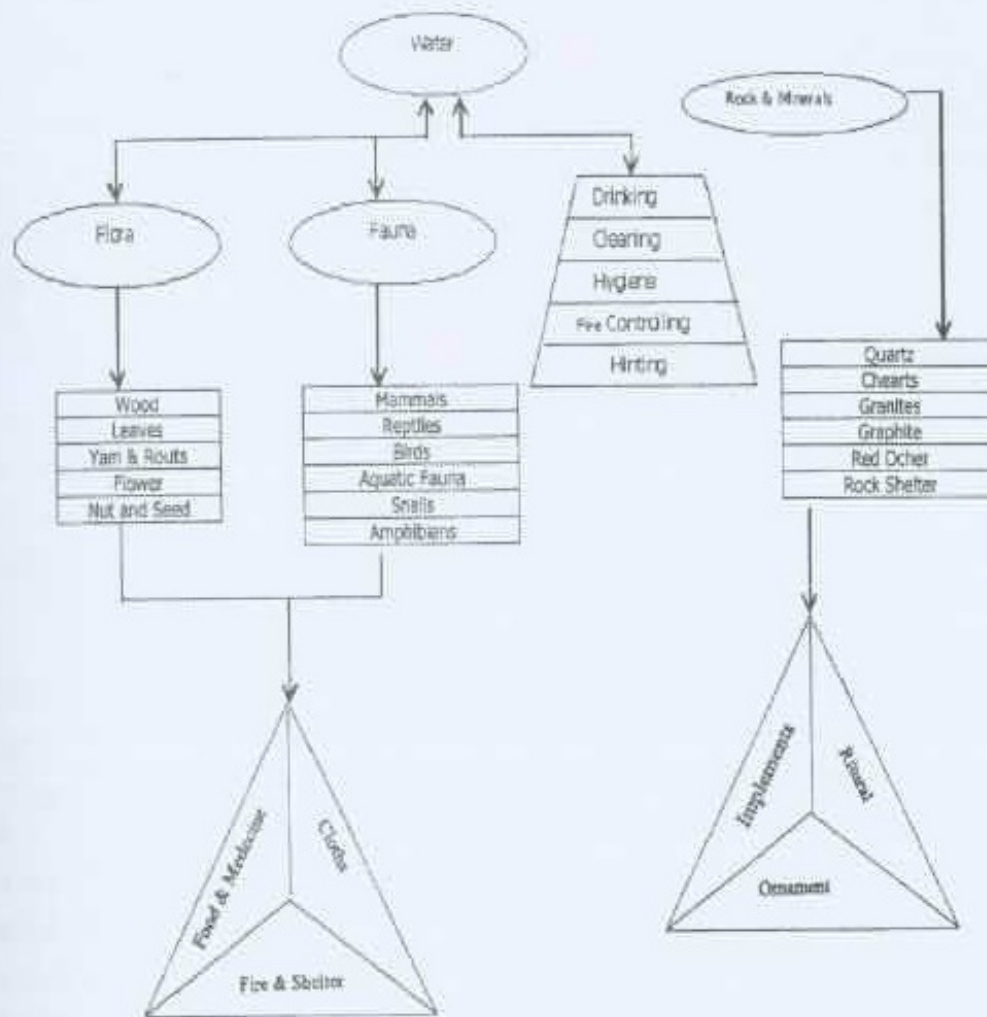


fig:03. The resource utilization pattern of Sigiriya – Dambulla region

However the faunal remains from the Sigiriya Dambulla area have been subjected to a quantity analysis. Therefore it is possible to sort out these to a certain extent.

### Floral Usage

Different methods of study of how prehistoric man used, faunal matter have improved. With the introduction of fields of study such as pollen analysis, phytolith analysis, diatom

analysis and the analysis of plant and animal remains it has been possible for archaeologists to get an idea of how prehistoric man used faunal material as food or for other purposes.

With the introduction of palynology by Prof Edmann it was used for archaeological studies during the 19<sup>th</sup> century. This enabled the solution of some problems in archaeology. It was Gustav Legerhiem a Swedish national who developed the methods of pollen analysis. Other scholars contributed to develop this field further. Vanpost who extended these studies in 1916 developed ideas of paleo environmental studies and developed a systematic basis (Schiffer 1983).

In the 1900's archaeologists collected pollen fossils for their studies. Accordingly they developed methods of determining approximate dates for glaciation or vegetational change. Iverson used these ideas and developed a study system in 1941 with reference to a Stone Age site in Denmark. In 1960's this system spread to other parts of the world such as Europe, North America and Asia (Schiffer 1983).

At present changes in the eco system have been studied using pollen analysis and based on contemporarily cultivated or distributed plants and those that were domesticated (Schiffer 1983). Using modern developments pollen fossils are used for carbon dating. The use of silico-phytoliths as faunal remains in archaeological studies was done by H.C Schellenberg in about 1908. No significant change took place in this method until about the 1970's but certain studies continued. Most specific developments took place since then (Schiffer 1983). This system of studies is connected to archaeology through subsistence patterns of ancient people, their use of stone implements, faunal types, contemporary environment humidity and temperature (Schiffer 1983).

The study of diatoms which are the preserved fossils in wet environments can be considered as an advancement on botanical studies. This field is developing fast. The next in this field is the study of floral remains. Though this field of study has developed elsewhere the development in Sri Lanka is relatively small. Though pollen analysis has been done here it has been used in the field of archaeology only to a small extent. It was used for the first time in Sri Lanka in the Sigiriya excavations (Herath 1984). This also has been used for historical sites. Since then it is an Indian Botanist who studied floral remains in a prehistoric study in Sri Lanka for the first time. He has studied the floral remains of the Bellena in Kitulgala (Kadjalle 1989) (fig.04).

Even in this study ideas on the prehistoric studies in Sri Lanka is very small. But different scholars have studied plant fossils at different times and presented different ideas (Deraniyagala 1943).



Fig: 04: Wild Plants' remains found from Bell Lena in Sri Lanka

Subsequently basic knowledge on the paleo-environment, the subsistence patterns of prehistoric man and radio active carbon dating was collected through the study of pollen diatoms and phytoliths in Sigiriya, Puttalam and Kalpitiya lagoons and the Horton Plains in a combined study of prehistory and botany (Epitawatta & Premathilaka 1995, Premathilaka 1995, Risberge & Premathilaka 1995, Miller, Risberge & Premathilaka 1999).

Prehistorians have expressed views on the floral remains used as food or for other purposes by prehistoric man obtained through the study of floral remains connected with the prehistory of

Sri Lanka (Deraniyagala 1992). The floral remains of a prehistoric site has been studied using evidence obtained through the study of modern botany and paleoenvironment. 145 plants used for food and 16 plants used for chewing, found all over Sri Lanka have been identified (Deraniyagala 1992, 634-641). It was necessary to study how these plants affected the dry zone within this common structure. Accordingly it could be thought that the prehistoric man of the dry zone could have used these plants for food because they are still commonly seen in this area. In addition to these, floral remains from excavations were also studied. As a result of using the pollen and floral parts these plants were also identified. Further those that are not available in the area at present, were also identified. These have given some evidence of the food pattern of prehistoric man. But it should be mentioned here that these conclusions are not reliable because only small samples have been used for these studies. These floral studies are important in comparing the dating of these floral remains and those for other remains (fig 05).

The prehistoric man has used plants for a variety of purposes. Food, medicine, fire wood, weapons, shelter, defense and rituals are some of the main purposes. Further some animals,

birds and animal produce such as eggs are obtained from the forest and these are also for the use of man. Accordingly animals and plants exist as a unitary resource (Butzer 1982). Thus the forests would have been one of their most important resources. Though these forests vary from country to country in Sri Lanka it exists in the form of the dry zone and the wet zone forests. So far no evidence has been found as to any variation from this pattern.

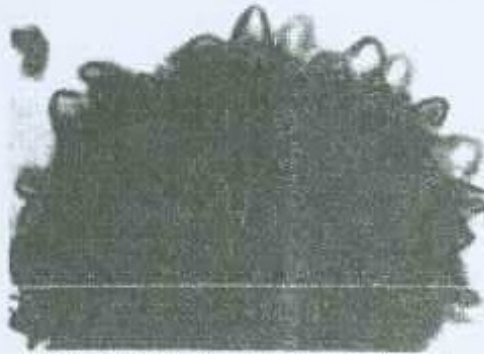


Fig: 05. Extinct Sweet potato pollen fossil found in potana cave

Considering the manner in which environmental conditions have affected man in Sri Lanka some scholars have attempted to divide the island into several climatic zones (Deraniyagala 1992, Wadia 1941, Domros 1974). But when taken as a whole it is reasonable to divide the country into wet and dry zones. But some plants can be seen in both zones (fig. 06).



Fig: 06. Floral utilization pattern of Sigiriya-Dambulla region

has not been possible to determine whether these people were nomadic or permanently settled in a place.

### Conclusion

It can be shown that prehistoric man utilized both these zones simultaneously according to radioactive carbon dating of finds from excavations. Therefore this is an indication that prehistoric man used the dry zone and the wet one simultaneously.

However until further studies are done in this frame of research it is difficult to present a definite view.

The reason for this is that so far it

However no evidence is available as to whether they consumed plant materials mostly. To confirm this so far no studies of phytoliths have been done using stone implements. If there was such a study some ideas could be confirmed by the extension of reasearch to the hinterlands of these settlements.

To study the nutritional value of the food consumed by prehistoric man, it is necessary to compare the edible plants they used and those found through botanical studies and their distribution. This will enable us to find how they prepared their food and its balanced nature. This can be done through the study of human bones.

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