

FURTHER  
STUDIES  
IN THE  
SETTLEMENT  
ARCHAEOLOGY  
OF THE  
SIGIRIYA-DAMBULLA  
REGION



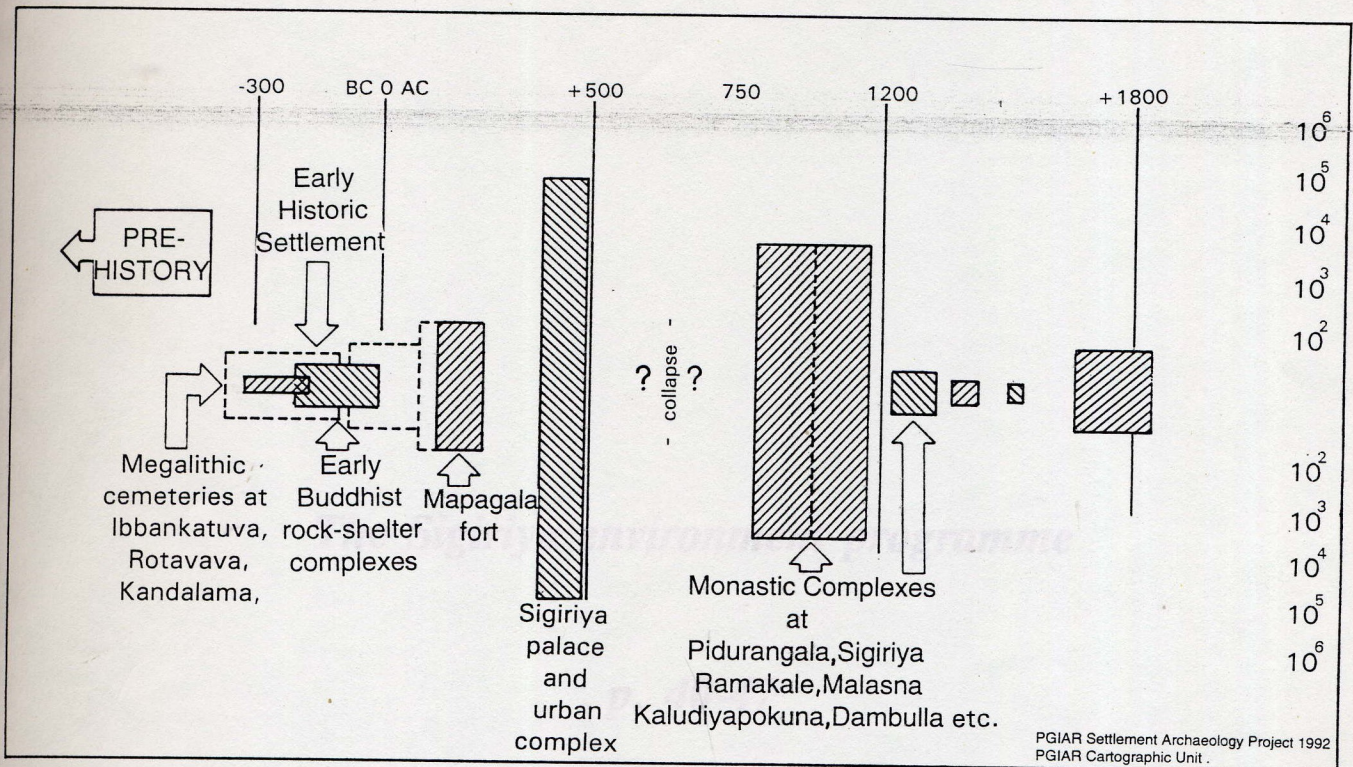


Figure 1:16 Development of monumental structures.

cal remains, especially the ethno-archaeology of food production.

The archaeological scope of such questions, and the investigative resources required in addressing them, in the context of the study area itself and in terms of the level of development of Sri Lankan archaeology, defines the intellectual and institutional horizons of the project. The present volume reflects the multi-disciplinary approach and the broad thematic and chronological range that has been achieved in SARCP. It displays the new perspectives and insights the project has brought to the study of this country's rich and multi-faceted history, undertaken principally by a new generation of Sri Lankan archaeologists, with the collaboration and assistance of our Swedish colleagues.

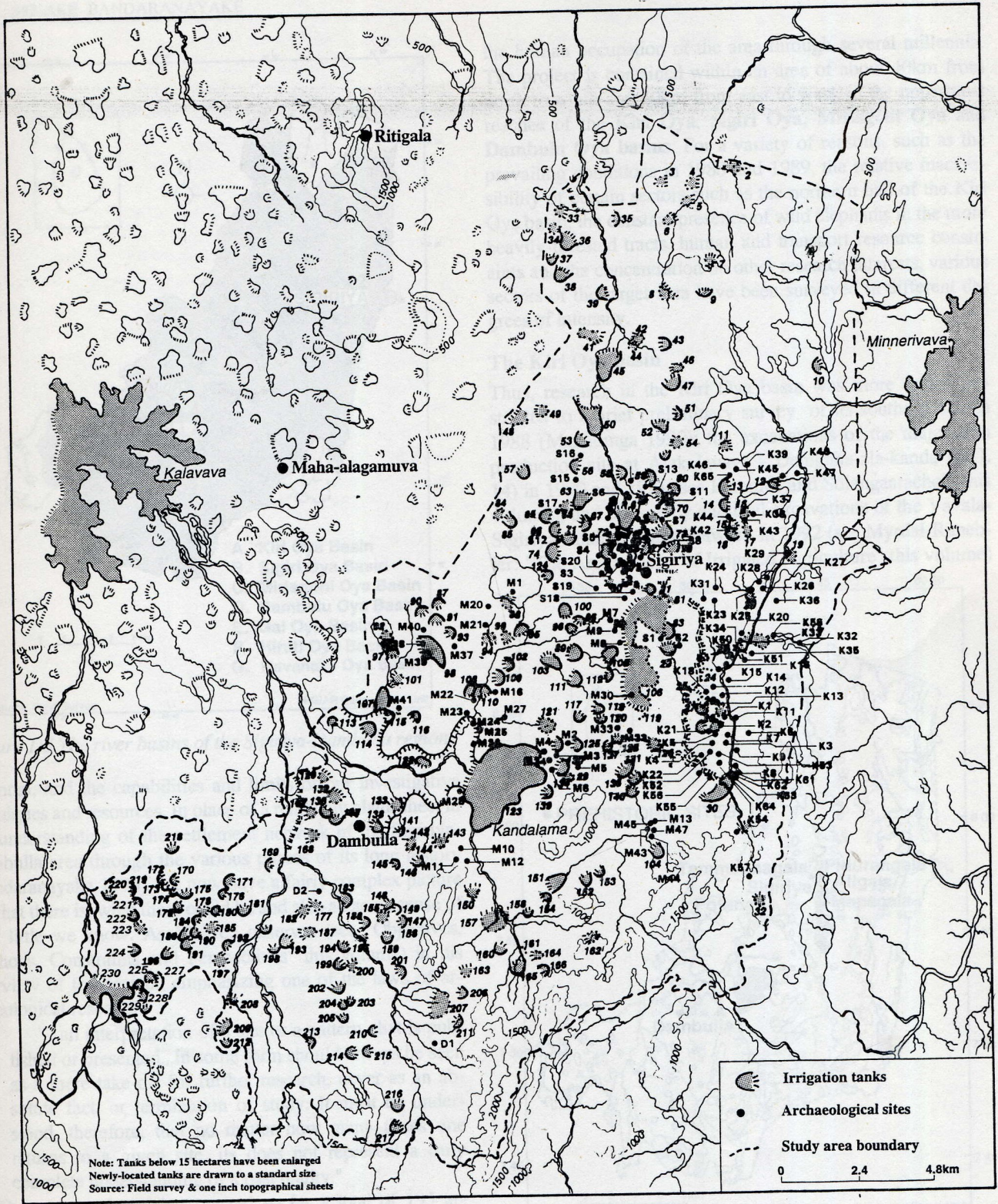
#### Future Perspectives

The program continues to maintain, in a number of different ways, the momentum generated during the last seven years. Several research dissertations based on or deriving from SARCP fieldwork are in progress. They are scheduled to be completed in 1994-95 and to be published as project monographs. These descriptive and analytical studies will form the project's most substantial research product.

Theoretical syntheses relating the composite and diachronic data generated to broader patterns and long range

processes of historical development, on a national, regional and global scale, are also being attempted - without losing the close focus on micro and macro-level fieldwork. In this context, comparative studies in irrigation, palaeo-ecology, urbanization, iron production, and the social history of fortifications are underway, at least in an incipient or programmatic form, and constitute some of the important areas of ongoing and future SARCP research, considerably expanding the project's intellectual terrain. The potential for such research in two areas of study was assessed recently in a field visit (led by the palaeo-ecologist, Prof. Urwe Miller, of the University of Stockholm) and in a paper read before the Sri Lanka Historical Association (Bandaranayake 1993). The latter discussed the possibilities of using data concerning irrigation works and monumental remains, on a local or national scale, as useful indicators of cycles of economic development, which could at the same time be related to long-range global processes. The type of projection that might be obtained from the study of monumental remains in the study area were presented in the form of a diagram (Fig.1.16), generated from the combined and partly 'guesstimated' evaluation of three factors - (a) site area; (b) estimated quantities of material and/or labour input; (c) level of technology.

In all the technical complexities of SARCP research the human dimensions of archaeology have not been forgotten.



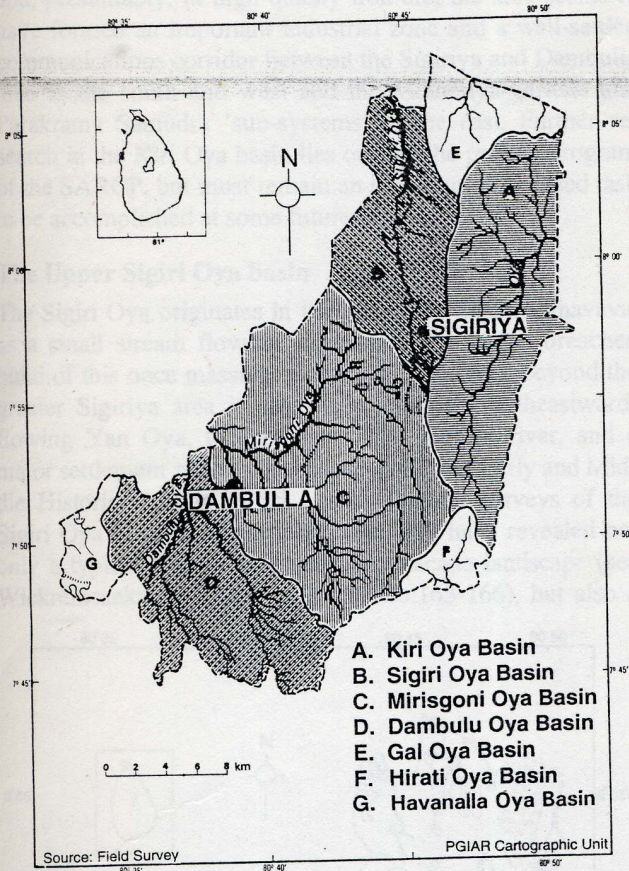


Figure 1:3 The river basins of the Sigiriya-Dambulla region.

potential, and the capabilities and limits of our investigative techniques and resources. In place of a relatively blank sheet in our understanding of the settlement network of the Sigiriya-Dambulla area through the various phases of its long history (Bandaranayake 1990), we now have a fairly complex picture of what there is, what there could be and also an acute sense of how little we know. As Mogren observes (see "Objectives, Methods, Constraints and Perspectives" this volume) in his overview of the project, emphasizing one of the laws of archaeological research:

"...an interpretation of a site or a pattern, that is published or presented...in some form should always be seen as a mere take-off for further research, never as an absolute fact, or termination of study. It must be understood, therefore, that no matter how many times one returns to a given site, its does not represent a truly complete understanding of a past reality."

Our surveys have documented so far a total of 195 archaeological sites and 203 irrigation tanks within the demarcated zone. This forms a complex, diachronic palimpsest, a superimposition, often one upon the other, of the remains of

the human occupation of the area through several millennia. The project is contained within an area of about 40km from north to south and 30km from east to west, in the uppermost reaches of the **Kiri Oya, Sigiri Oya, Mirisgani Oya and Dambulu Oya basins**. For a variety of reasons, such as the prevailing conditions in 1988 and 1989, the relative inaccessibility of certain sectors such as the northern half of the Kiri Oya basin, the constant presence of wild elephants in the more heavily-forested tracts, human and transport resource constraints and the concentration on other research interests, various sectors of the target area have been surveyed in different degrees of intensity.

### The Kiri Oya basin

Thus, research in the Kiri Oya basin was more or less restricted to a brief preliminary survey of its southern half in 1988 (Manatunga 1990); the excavations of the major iron production site at Alakolavava - Dehigaha-ala-kanda (**KO. 14**) in 1990 and 1991 (see Forenius and Solangaarachchi this volume); and the survey and trial excavations of the Vavala-Sigiriya canal and dam network in 1992 (see Myrdal-Runebjerg: "The Archaeology of Irrigated Agriculture" this volume)

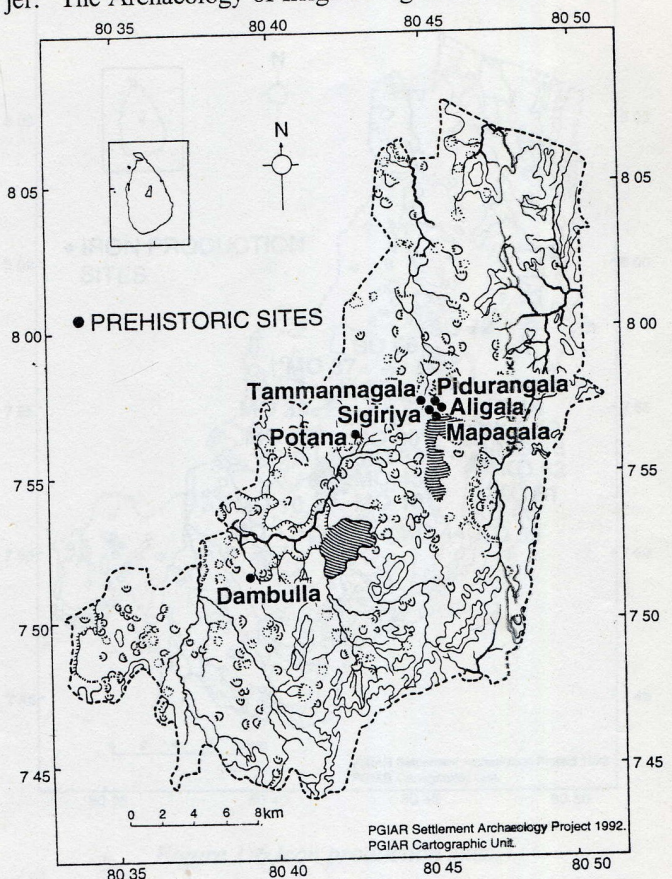


Figure 1:4 Prehistoric sites.

and 1993. Rich in spring water resources, limestone quarries and, presumably, in high-quality iron-ore, the area seems to have formed an important industrial zone and a well-settled communications corridor between the Sigiriya and Dambulla area to the south and west and the Minneriya-Giritale and Parakrama Samudra 'sub-systems' to the east. Further research in the Kiri Oya basin lies outside the present program of the SARCP, but must remain an important unfinished task to be accomplished at some future date.

**The Upper Sigiri Oya basin**

The Sigiri Oya originates in the bed of the Sigiri Mahavava, as a small stream flowing northwards out of the breached bund of this once massive, man-made lake. Well beyond the greater Sigiriya area it ultimately joins the northeastward-flowing Yan Oya, the country's fifth longest river, and a major settlement zone of the protohistoric and Early and Middle Historic Periods in Sri Lanka. Limited surveys of the Sigiri Oya basin between 1988 and 1990 have revealed not only a typical tank village and tank cascade landscape (see Wickremesekera 1990a:95-101; 1990b:163-166), but also a

series of riverside settlements of EHP-1 which have had to remain uninvestigated. It is only the Talkote complex (Mogren this volume), Tammannagala (Somadeva and Kasthurisinghe this volume) and the prehistoric sites of Aligala and Potana (Adikari: "Approaches to the Prehistory of the Sigiriya-Dambulla Region" this volume; Karunaratne and Adikari: "Excavations at Aligala" this volume; Adikari: "Excavations at the Sigiri-Potana Cave Complex" this volume) that have been the subjects of trial excavations. The Sigiriya-Mapagala-Ramakale-Pidurangala complex and the Sigiriya hinterland briefly discussed below, dominate this basin and remain the best-researched section of the entire study area.

**The Mirisgoni Oya and Dambulu Oya basins**

The documentation and survey work in the Mirisgoni Oya and Dambulu Oya basins has not been as extensive as in the Sigiriya hinterland, not so much for reasons of inaccessibility or the difficulty of the terrain as in the Kiri Oya area, but rather for those of time and resource allocation. The early work on the study of the irrigation network (Wickremesekera

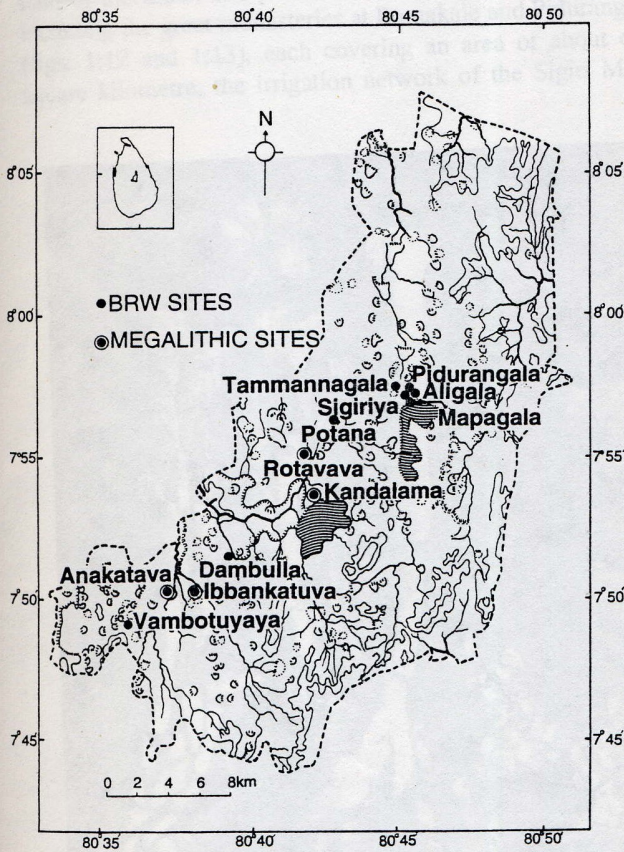


Figure 1:5 Protohistoric - Early Historic (EHP 1) sites.

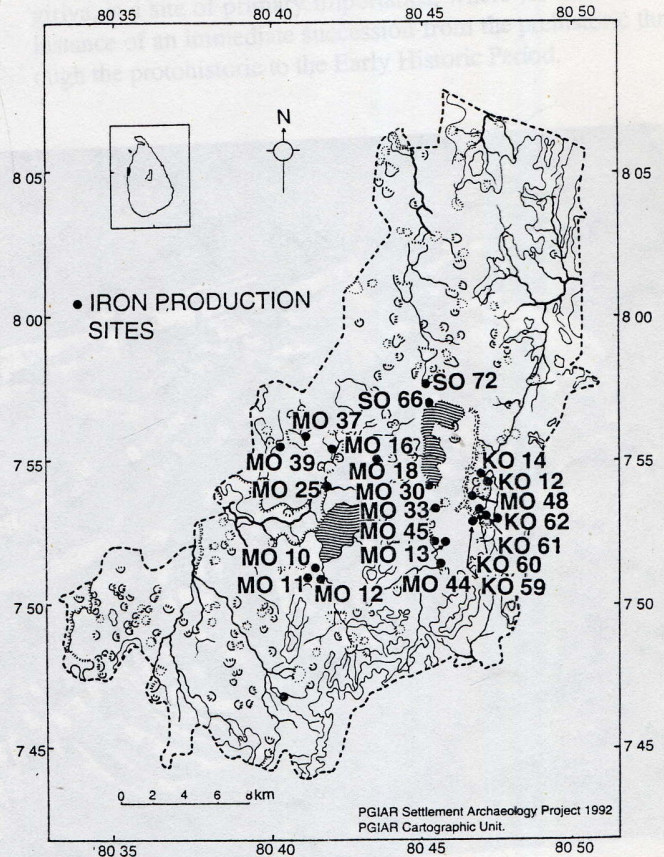


Figure 1:6 Iron production sites.

1990a) could not be pursued, greater emphasis being laid on and resources allocated to the excavations of the important prehistoric site at Potana (which was in danger of being destroyed by modern construction work), the substantial settlement site at Ibbankatuva, and the survey of iron production sites in the southern sector of the Mirisgona Oya basin (Karunaratne and Mogren, to be published in Forenius and Solangaarachchi (eds.) in preparation). The Potana excavations, briefly described below (Adikari this volume) have produced a wealth of data, especially of faunal remains - nearly 300 kilograms - and human skeletal material from a prehistoric horizon. This rock shelter has also become a test site for our first steps in palaeobotanical studies (by T.R. Prematilake), and the experimental application of chemical analysis to soil as a prelude or complement to excavation (by A. Tantillage).

### The Sigiriya hinterland

The most intensively surveyed area is the immediate hinterland of the urban and palace complex at Sigiriya (fig. 1:8), including the great monasteries at Ramakale and Pidurangala (figs. 1:12 and 1:13), each covering an area of about one square kilometre, the irrigation network of the Sigiri Mah-

avava and the Sigiri-Vavala canal (Myrdal-Runebjer: "The Archaeology of Irrigated Agriculture" this volume; see also fig. 1:8), and the complex of archaeological sites around the ancient settlements at Talkote (Mogren this volume: "The Archaeology of Talkote").

### From Prehistory to the Early Historic Period

A much more varied and intricate picture than was hitherto imagined has now emerged. We are now aware of the prehistoric occupation of the Sigiriya area, with nearly five prehistoric sites available within a 6km radius of Sigiriya itself. A substantial body of data relating to prehistoric habitat, technology, subsistence and lifeways, and even ritual practices has been gathered and will be the subject of on-going analysis and research (Adikari this volume: "Approaches to the Prehistory of the Sigiriya-Dambulla region"; Karunaratne and Adikari this volume: "Excavations at Aligala"; Adikari this volume: "Excavations at the Sigiri-Potana Cave Complex"). Aligala, within the eastern sector of the citadel area at Sigiriya, is a site of primary importance, where we have a rare instance of an immediate succession from the prehistoric through the protohistoric to the Early Historic Period.

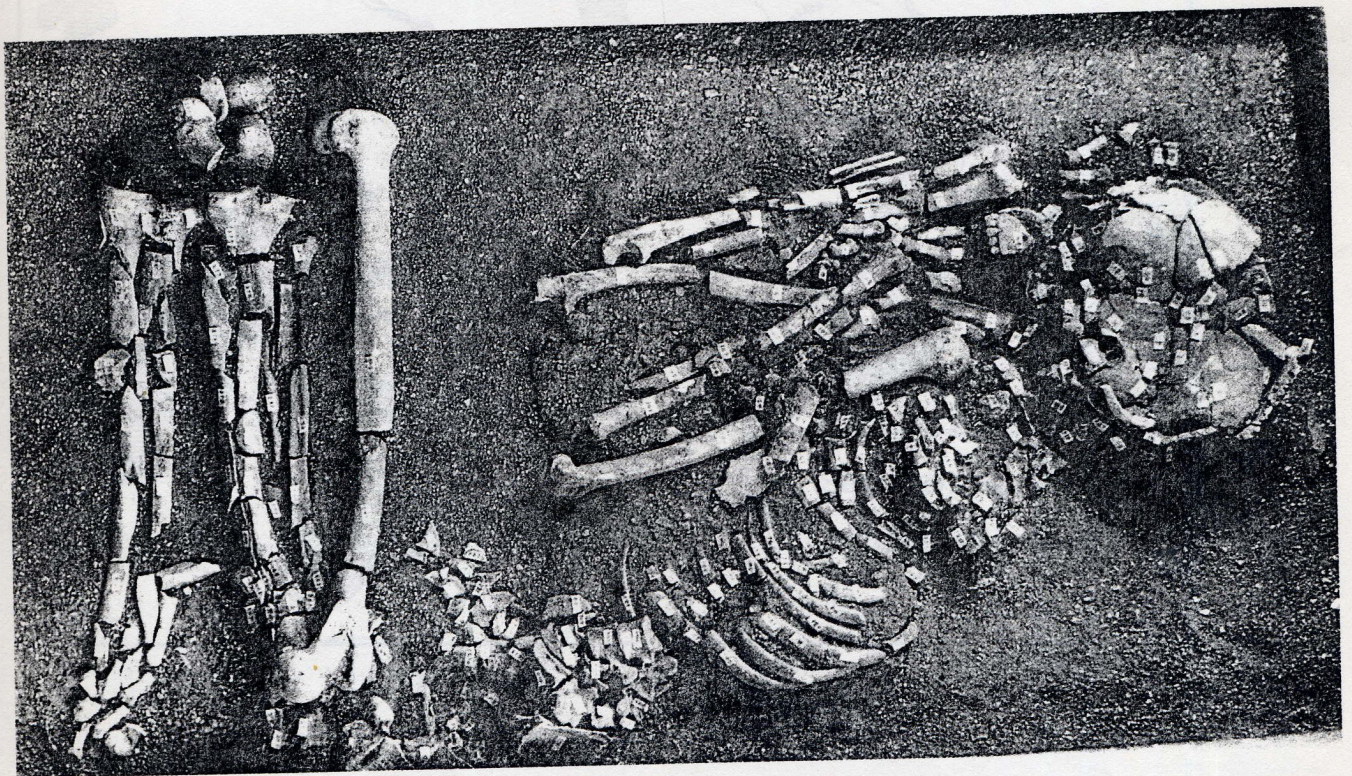


Figure 1:7 'Potana Man' - skeleton No. 2 from cave 1, context 10, Sigiri-Potana (MO. 14). Three  $^{14}\text{C}$  dates for this context have a 5000 - 4500 BC range. There is no indication whether the skeleton is intrusive. Photo: CCF - Sigiriya Project.

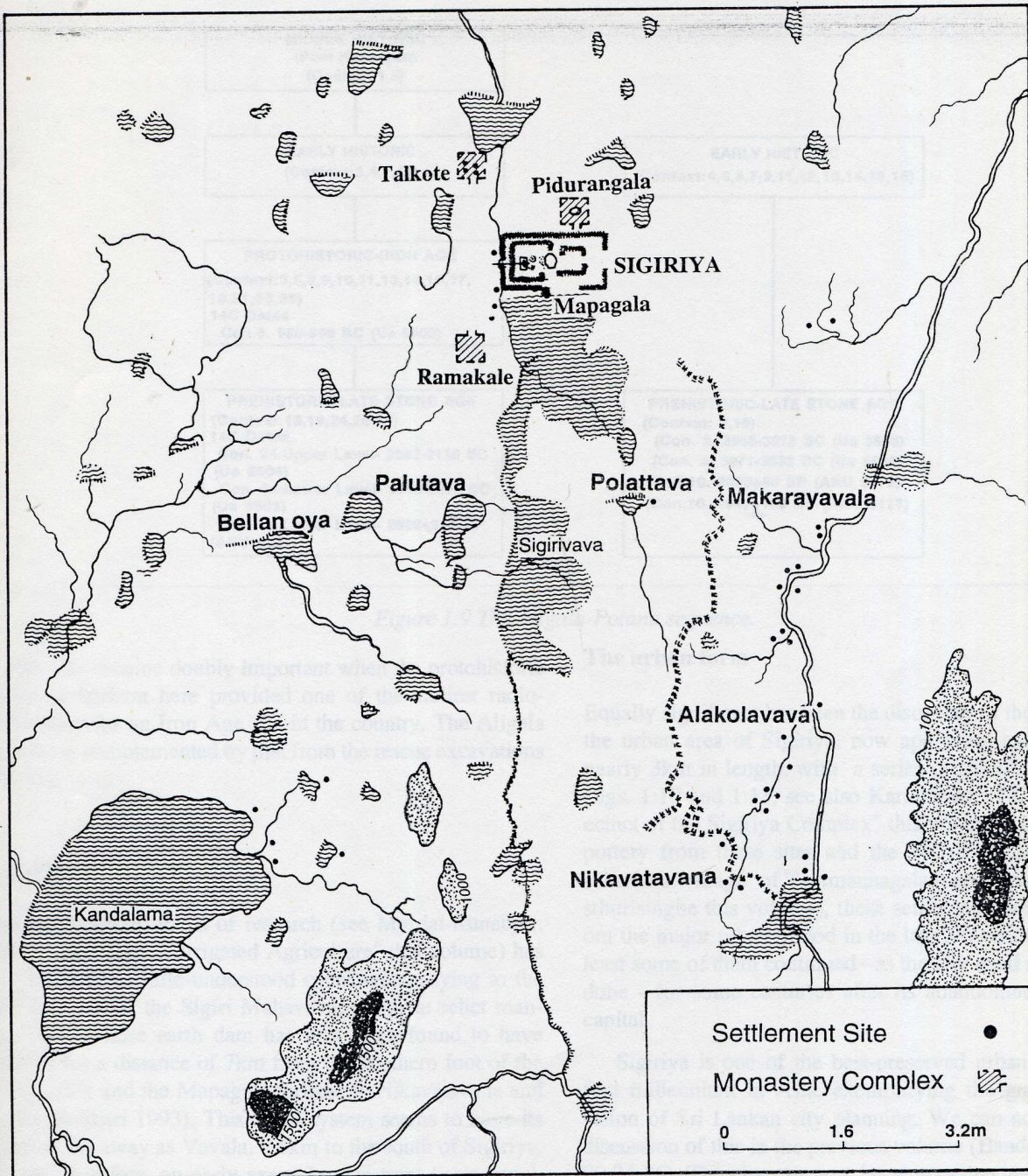


Figure 1:8 The Sigiriya hinterland.

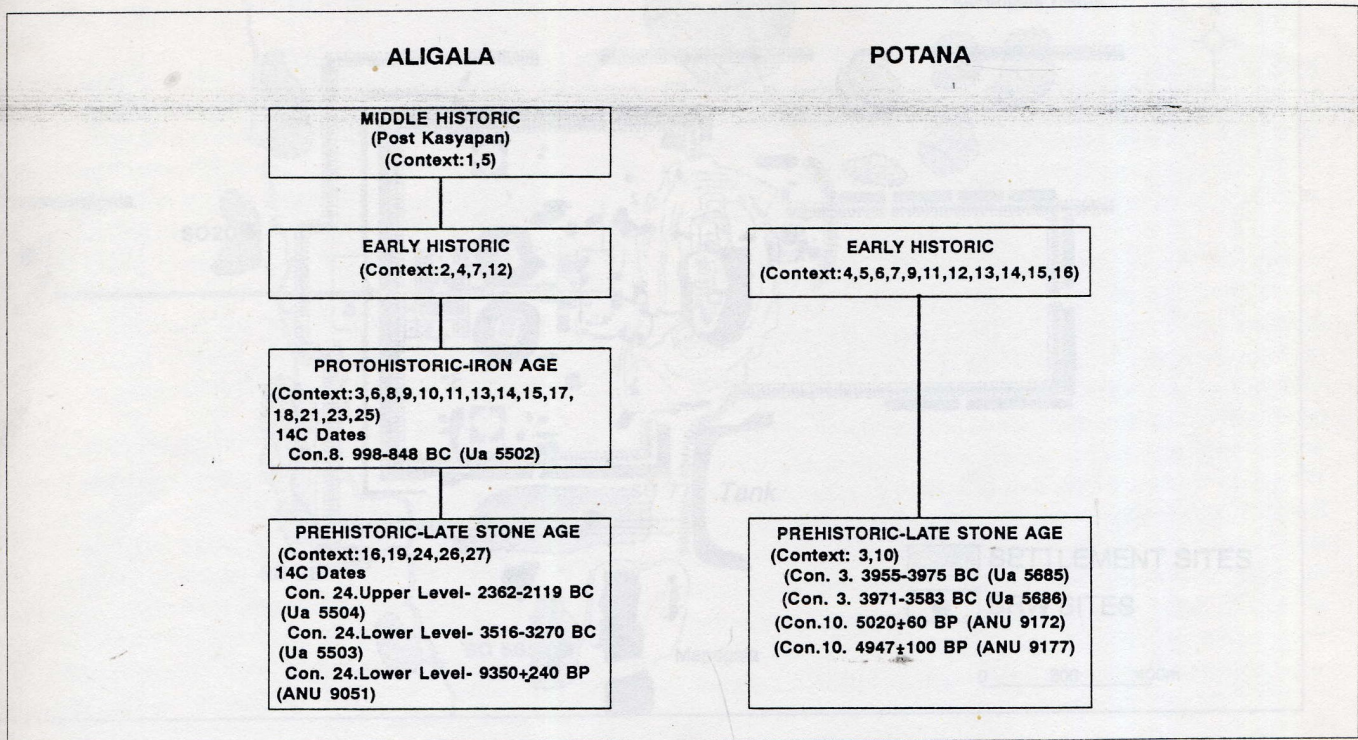


Figure 1:9 The Aligala-Potana sequence.

This site became doubly important when the protohistoric settlement horizon here provided one of the earliest radiometric dates for an Iron Age site in the country. The Aligala sequence is complemented by that from the rescue excavations at Potana.

**Irrigation**

Another important focus of research (see Myrdal-Runebjer: "The Archaeology of Irrigated Agriculture" this volume) has been the hitherto little-understood canal system lying to the south and east of the Sigiri Mahavava, the great relict man-made lake, whose earth dam has now been found to have extended for a distance of 7km from the southern foot of the Sigiriya rock and the Mapagala fortress to Nikavatavana and beyond (Adikari 1993). This canal system seems to have its origins as far away as Vavala, 9.6km to the south of Sigiriya. It forms, therefore, an early example of a trans-basin canal, whose complex technology, function, chronology and manpower inputs are continuing subjects of investigation. The Sigiri Mahavava seems to have been supplemented at its southernmost point by another canal which seems to have connected the Kuda Gona Oya to the great lake from a point 11km away.

**The urban form**

Equally significant has been the discovery of the full extent of the urban area of Sigiriya, now appearing as a walled city nearly 3km in length, with a series of suburban settlements (figs. 1:10 and 1:11; see also Karunaratne: "The Eastern Precinct of the Sigiriya Complex" this volume). Judging by the pottery from these sites and the 14C dates from the large suburban 'village' of Tammannagala (see Somadeva and Kasthurisinghe this volume), these settlements seem to date from the major urban period in the late 5th century AD, but at least some of them continued - as the city itself seems to have done - for some centuries after its abandonment as a royal capital.

Sigiriya is one of the best-preserved urban forms of the first millennium in Asia, exemplifying the grand scale and vision of Sri Lankan city planning. We can now add to the discussion of this in the previous volume (Bandaranayake 19-90:24-26). The city can now be seen as having an elongated rectangular form, nearly 3km from east to west and 1km from north to south, based on a square module of *circa* 170m and a concentric-cum-axial design. This geometrical conception also accommodates organic and asymmetrical elements such as the Sigiriya rock itself, the terraced hill around the base of the rock, the Mapagala fortress, the partly man-made, partly na-



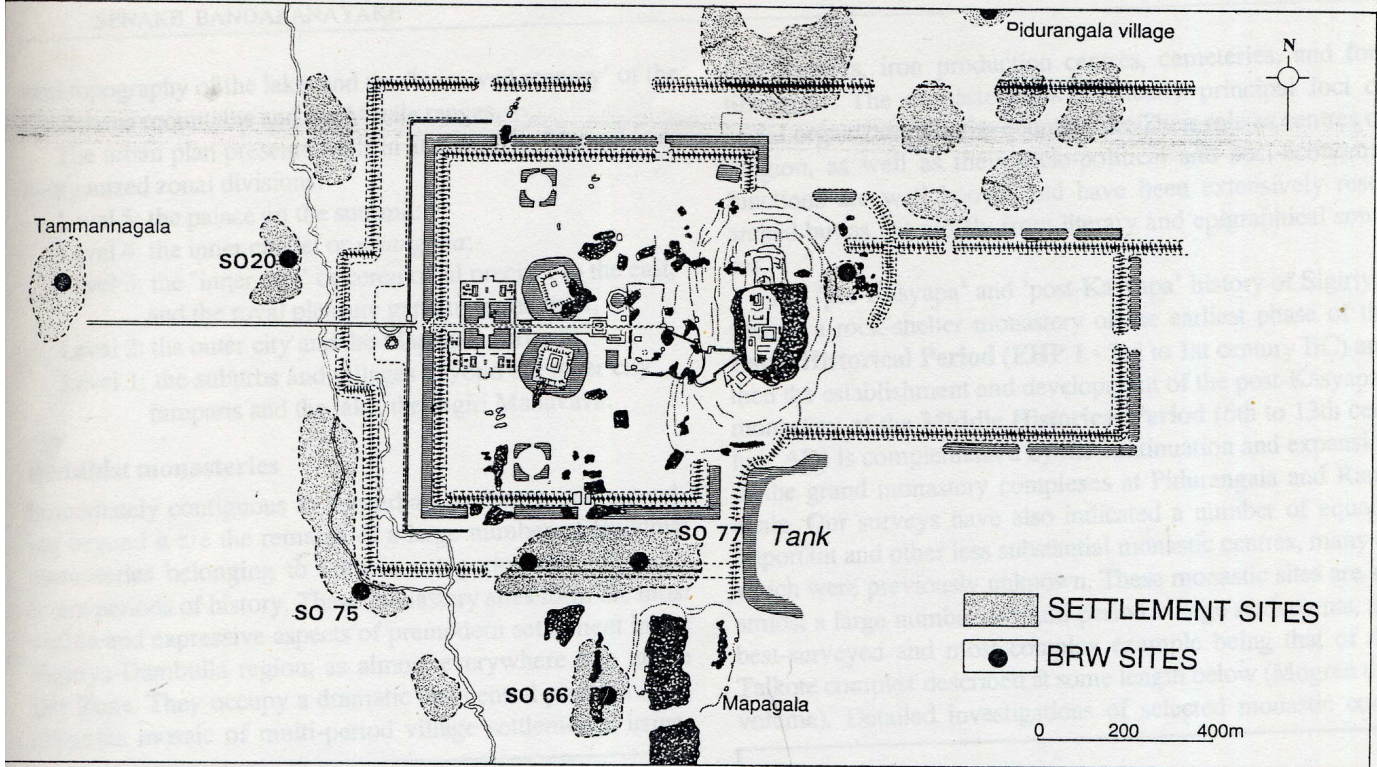


Figure 1:10 Suburban settlements of the 5th-7th century. The black dots indicate the existence of BRW utility EHP 1 settlements.

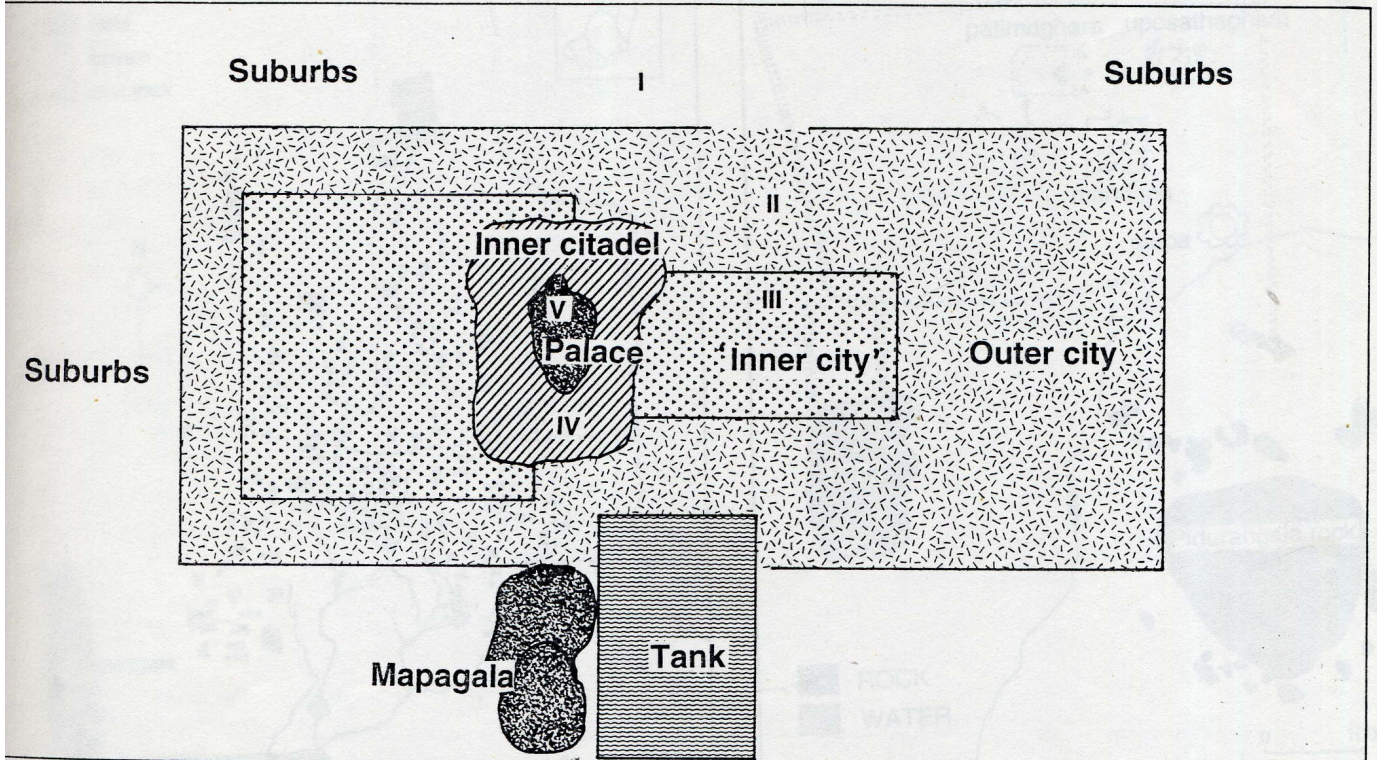


Figure 1:11 Schematic plan of the urban centre.

tural topography of the lake, and the 'borrowed scenery' of the Kandalama mountains and the Matale ranges.

The urban plan presents itself in at least five, hierarchically-organized zonal divisions:

- Level 5: the palace on the summit;
- Level 4: the inner citadel or *rajangana*;
- Level 3: the 'inner city' or ceremonial precinct to the east, and the royal pleasure gardens to the west;
- Level 2: the outer city and the Mapagala fortress;
- Level 1: the suburbs and villages beyond the outer city ramparts and the lake, the Sigiri Mahavava.

**Buddhist monasteries**

Immediately contiguous to this urban landscape and extending beyond it are the remains of a large number of Buddhist monasteries belonging to various categories and from different periods of history. These monastery sites form the most visible and expressive aspects of premodern settlement in the Sigiriya-Dambulla region, as almost everywhere else in the Dry Zone. They occupy a dramatic and central position in an elaborate mosaic of multi-period village settlements, irriga-

tion features, iron production centres, cemeteries, and fortifications. The monasteries were clearly principal foci of social organization in the countryside. Their role as centres of religion, as well as their socio-political and socio-economic functions are well known and have been extensively researched but as yet mostly from literary and epigraphical sources.

The 'pre-Kasyapa' and 'post-Kasyapa' history of Sigiriya, first as a rock-shelter monastery of the earliest phase of the **Early Historical Period (EHP 1 - 3rd to 1st century BC)** and then the establishment and development of the post-Kasyapan monastery of the **Middle Historical Period (6th to 13th century AD)** is complemented by the continuation and expansion of the grand monastery complexes at Pidurangala and Ramakale. Our surveys have also indicated a number of equally important and other less substantial monastic centres, many of which were previously unknown. These monastic sites are set amidst a large number of multi-period village settlements, the best-surveyed and most complex example being that of the Talkote complex described at some length below (Mogren this volume). Detailed investigations of selected monastic com-

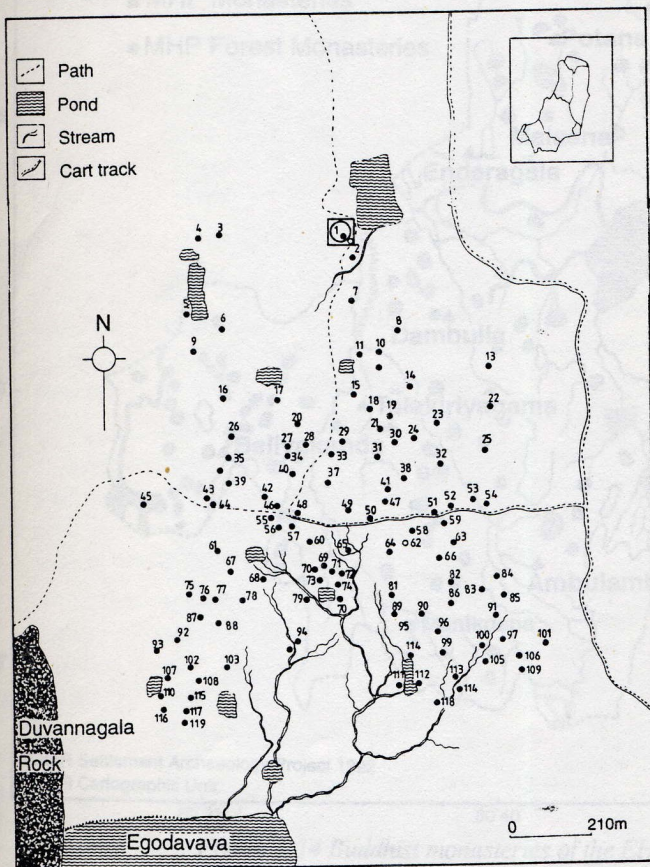


Figure 1:12 Ramakale.

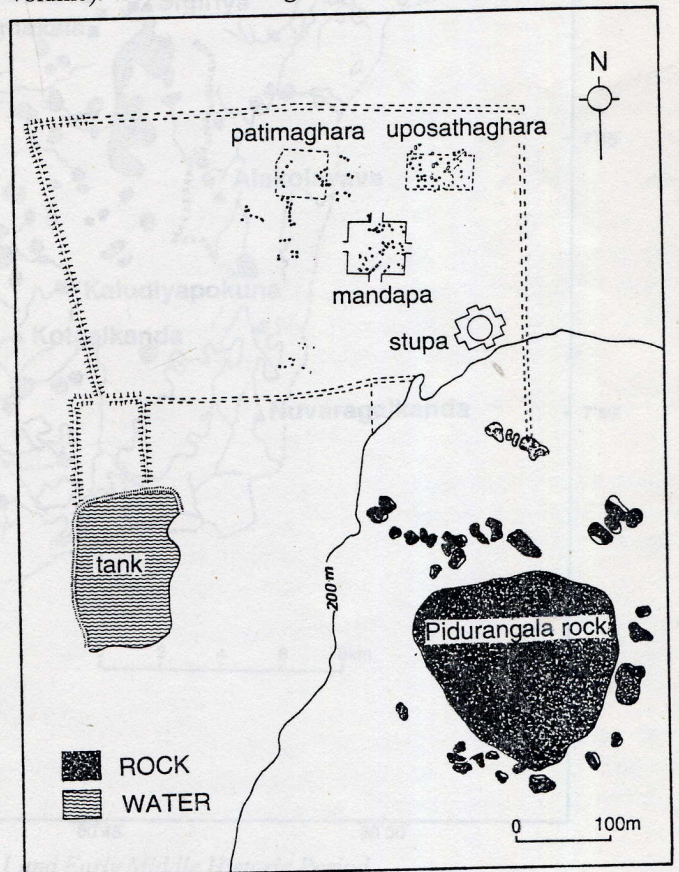


Figure 1:13 Pidurangala.

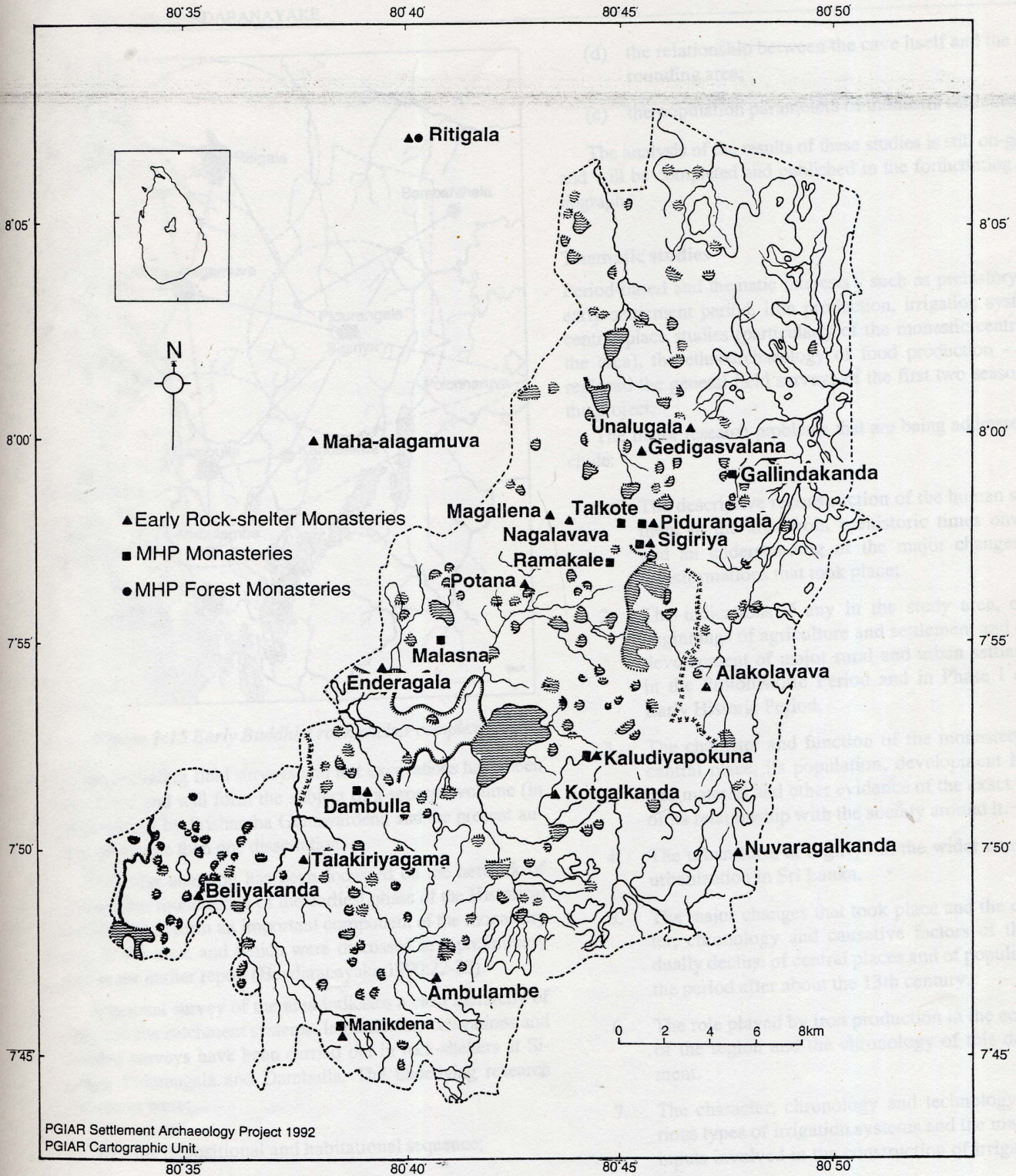


Figure 1:14 Buddhist monasteries of the EHP 1 and Early Middle Historic Period.

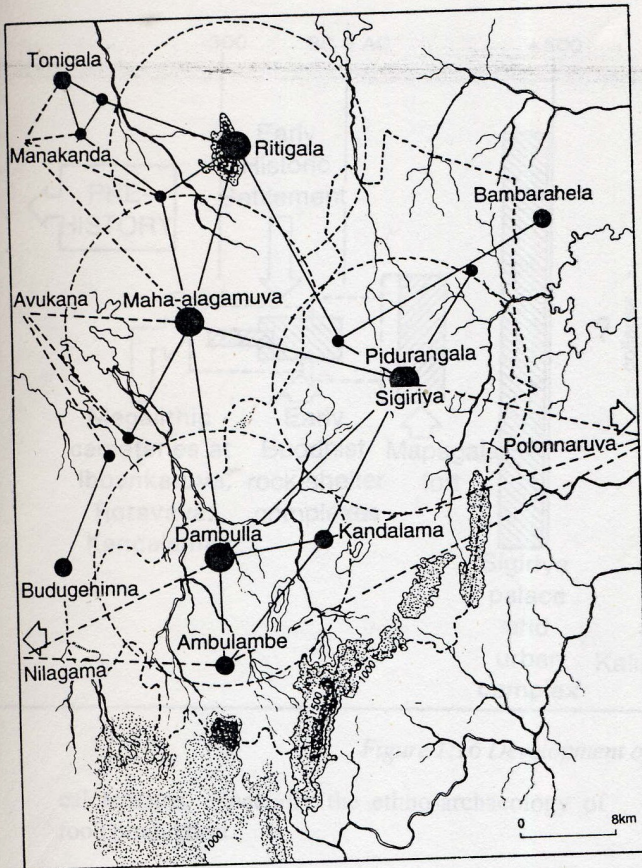


Figure 1:15 Early Buddhist rock shelter complexes.

plexes, including field surveys and test excavations have been completed and will form the subject of a separate volume (in preparation - by Prishantha Gunawardena and the present author) and more than one dissertation.

Particular attention has been focussed on the network of rock-shelter monasteries of the earliest phase of the Historical Period, which form an important component of the monastery sites in the area, and which were discussed in a preliminary way in the earlier report (Bandaranayake 1990:22-23).

A general survey of the area indicates a clear hierarchy of sites and site catchment systems. In particular, excavations and detailed surveys have been carried out in rock-shelters at Sigiriya, Pidurangala and Dambulla. The underlying research objectives were:

- (a) the depositional and habitational sequence;
- (b) the study of rock-shelter architecture;
- (c) the extent and use of space within a rock shelter and its maximum number of occupants in a cave;

- (d) the relationship between the cave itself and the surrounding area;
- (e) the population parameters of monastic settlement.

The analysis of the results of these studies is still on-going and will be completed and published in the forthcoming monograph.

### Thematic studies

Period-based and thematic interests - such as prehistory, the early settlement period, iron production, irrigation systems, central place studies (particularly of the monastic centres in the area), the ethnoarchaeology of food production - have replaced the general field surveys of the first two seasons of the project.

The major research problems that are being addressed include:

1. The descriptive reconstruction of the human settlement in the area from prehistoric times onwards and an understanding of the major changes and transformations that took place;
2. The indications if any in the study area, of the beginnings of agriculture and settlement and of the development of major rural and urban settlements in the Protohistoric Period and in Phase I of the Early Historic Period.
3. The character and function of the monastery as a central place, its population, development history and material and other evidence of the exact nature of its relationship with the society around it.
4. The urban form at Sigiriya in the wider context of urbanization in Sri Lanka.
5. The major changes that took place and the character, chronology and causative factors of the gradually decline of central places and of population in the period after about the 13th century.
6. The role played by iron production in the economy of the region and the chronology of this development.
7. The character, chronology and technology of various types of irrigation systems and the manpower inputs involved in the construction of irrigation works.
8. The usefulness of specific contemporary ethnographic studies in the interpretation of archaeological