

# Seven Years in Sihagiri Bim

## An Account of a Sri Lankan-Swedish Collaboration in Settlement Archaeology in Sigiriya 1988–1995

Mats Mogren

During the course of seven years Sri Lankan and Swedish archaeologists in collaboration built up a core of what is today the Sri Lankan settlement archaeology. Through surveys, excavations and ethnoarchaeological studies an understanding was gradually obtained regarding settlements and subsistence strategies of the Sri Lankan dry zone, from the Mesolithic to the present, and a generation of young Sri Lankan archaeologists got a fair amount of necessary field training. The primary objective was to develop the human resources of Sri Lankan archaeology, but something can also be said about the research results of the project. This article gives a generalised background and, in very brief outline, an overview of the work done, its methodology, constraints and results.

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In 1984 Senake Bandaranayake, the renowned Sri Lankan archaeologist, known in Sweden for some of his writings (Bandaranayake 1977, 1985) and a long-time friend of our country, visited some of our archaeological institutes in an attempt to arouse interest in a Sri Lankan-Swedish collaboration in archaeology. Nothing much came out of it at the time, but at the Southampton WAC in 1986 he met with David Damell, then at the Swedish Central Board of National Antiquities, and plans started forming for a collaboration financed by SAREC (the Swedish Agency for Research Cooperation with Developing Countries – now part of SIDA, the Swedish International Development Cooperation Agency), and with the Swedish Central Board of National Antiquities and the newly formed Postgraduate Institute of

Archaeology (PGIAR) in Colombo as working partners. In 1987 I was asked by Damell if I was interested in setting up a program together with the Sri Lankans. He did not have to ask twice.

A reconnaissance trip was undertaken by me in February and March 1988, when the outline of the project was discussed, and during six consecutive field seasons 1988-93 a large amount of work was carried out, which in the last years of the project was developed to publication standard (Bandaranayake & Mogren, Eds. 1994). While SAREC granted the financing and the Central Board of National Antiquities provided an administrative framework for the Swedes, the objectives and implementation strategies were decided upon by the PGIAR directorship in collaboration with the main Swedish consultants.

In retrospect this collaboration has meant a lot to both Swedes and Sri Lankans. The human resources have developed considerably on *both* sides and a large number of enduring friendships have been established. Spin-offs are forming all the time, most recently in Lund, where a permanent exchange and collaboration agreement was signed in September 1997, which hopefully will form the basis of a new and still more profound phase in Sri Lankan-Swedish archaeological contacts.

#### BACKGROUND

In 1988 Sri Lankan archaeology already had a century-long history to look back upon. The Archaeological Department, the Sri Lankan equivalent to our Central Board of National Antiquities, was formed in 1890 during the British colonial administration and with H.C.P. Bell as its first Commissioner of Archaeology.

During this first century, focus was mainly on the manifest architecture of the royal centres and major monasteries of the Early and Middle Historic phases of Sri Lankan history, from about the 3<sup>rd</sup> century BC to the 13<sup>th</sup> century AD. Good knowledge was obtained about the politico-religious superstructure of ancient Sri Lanka and its topography. The ruins of the royal centres of Anuradhapura, Polonnaruwa and Sigiriya were cleared from jungle growth and partly restored. Early British efforts were continued by the archaeologists of independent Sri Lanka, at times in collaboration with colleagues from the major Western countries. In the process Sri Lankan tourism and Sinhala-Buddhist identity had been given magnificent show-cases.

A second line of development, quantitatively minor in relation to the monument archaeology, but with an equally long history and also carried out at a qualitatively high level, evolved in the field of Stone Age research (Deraniyagala 1980). This development was crowned with S.U. Deraniyagala's

doctoral dissertation at Harvard *The Pre-history of Sri Lanka* (Deraniyagala 1992).

The rural population of the ancient kingdoms was almost totally overlooked by archaeologists, however. Nobody seemed inclined to ask the relevant questions about the economic base of the politico-religious superstructure. The thousands of ancient irrigation reservoirs (tanks), which dot the countryside of dry zone Sri Lanka, were studied through written records (Brohier 1934–1935) and attracted some interest from engineers and surveyors for their visible features and from historians and other scholars for their sluice technology (e.g. Gunawardana 1978, 1989). Yet they were more or less taken for granted by archaeologists and human geographers, as were the settlement systems that were dependent on these water resources, when models of pre-modern society were put forth (cf. Perera 1978; Madduma Bandara 1985). There is no total lack of interest in questions regarding settlement structure, but the approaches to the problem complex are mostly on a macro-scale, where, for want of relevant data regarding the societal base, the emphasis is on elite settlement hierarchies (e.g. Ismail 1995).

The only notable exception to the neglect of rural settlements, and the only true settlement-archaeological work written before 1988 in Sri Lanka, is the dissertation *Early Settlements in Jaffna. An Archaeological Survey* by the Tamil scholar Ponnampalam Ragupathy (1987), who unfortunately was forced into exile by the ongoing civil war. His book deals with quite another type of landscape, though: the arid Jaffna peninsula where irrigation water is taken from wells.

Another important departure point for future research is the work done by Sudarshan Seneviratne on geological prerequisites for the macro-settlement distribution of the dry zone (e.g. Seneviratne 1988).

In 1988 Eva Myrdal-Runebjer made a series of interviews that resulted in a small book, which for us functioned as a "mapping

of the intellectual landscape” of Sri Lankan archaeology and related disciplines (Myrdal-Runebjer 1990). Thus we also got to know several of the leading scholars of the country, which for us was a great asset and a pre-requisite for further efforts.

#### THE STUDY AREA – THE SIHAGIRI BIM

It was the intention of Senake Bandaranayake, director of the PGIAR, to try and change the situation with its emphasis on monument archaeology, and thus in 1988 the SARCP (The Settlement Archaeology Research and Collaboration Project) was formulated.

The fieldwork area in the central parts of the island, the plains around the 5<sup>th</sup>-century royal centre of Sigiriya and the major monastery of Dambulla (fig. 1), both designated as World Heritage Sites, was chosen for several reasons. The first and most important reason was that the UNESCO/CCF-funded Cultural Triangle project at Sigiriya could provide the necessary infrastructure in the form of lodgings and work space. The project had been running since 1982, and Bandaranayake was the director of it as well as of a similar project at Dambulla (for a presentation of the Cultural Triangle, see Silva 1989). Officers of the Triangle project took part in the SARCP work from the start, and several students who got their field training through the SARCP obtained employment in the Triangle project, so there was a symbiotic relationship, even though the SARCP was kept apart from the Triangle administratively and research-wise.

The second reason was that most of the societal superstructure sites of the area were well known and subjected to research ever since T.H. Blakesley surveyed the area in the 1870s and H.C.P. Bell started working at Sigiriya in 1894 (Blakesley 1876; Bell & Bell 1993:83–101). Sigiriya itself is partly a monastic complex with a long history spanning more than a millennium from the 3<sup>rd</sup> century BC until at least the 10<sup>th</sup> century AD

and with briefer periods of monastic occupation also after that. Sigiriya is also partly an urban site, earlier thought to measure 1070 x 1520 m within the outer ramparts, but during the course of SARCP fieldwork found to extend over a 1 x 3 km area, and to have had extensive “suburbs”. It had a royal palace on the partly terraced, ca. 1.5 ha large, top plateau of a 199 m high monadnock rock rising steeply from the plain. This royal city has the best-preserved example of an Asian pleasure garden from the first millennium AD (Bandaranayake 1990, 1993a, b). It also comprises the citadel-like structure of Mapagala (“the Vice-roy’s rock”) just south of the central complex, with its “cyclopean” stone walls, for which many differing dating suggestions have been submitted throughout the research history of Sigiriya. In addition to

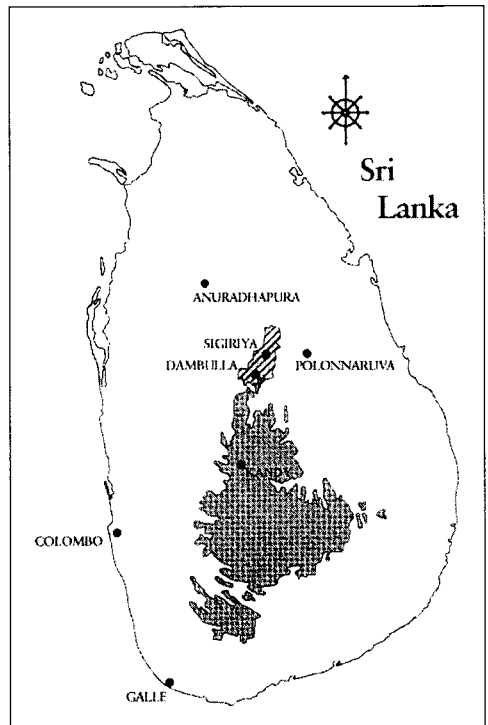


Fig. 1. Map of Sri Lanka, with the research area of the project, the Sihagiri Bim, marked in hatching. The shaded area at the centre of the island is the highland region. (Map by Kenneth Berman, LUHM, Lund, revised by Staffan Hyll.)

these architectural remains, there are remains of a complex hydraulic system.

The other pivot of the region, the monastic complex of Dambulla with its 73 rock shelter residences of which five large caves are still in use by the monastic community, has had an enormous importance for the region from its establishment in the 3<sup>rd</sup> century BC to the present, religiously, economically and politically (Bandaranayake 1993c).

The research region delineated by the project coincided well with what in ancient times was known as *Sihagiri Bim*, the territory of Sigiri (fig. 2). It extends northwards from the foothills at the northern edge of the central highlands of the island, and is delimited on both the east and west sides by low ranges of mountains or hills.

The plain in between, measuring ca. 16–20 km east–west and ca. 40 km north–south, is relatively flat and studded with more than 200 irrigation tanks, abandoned or restored. The number may seem high, but it is in fact much lower than in the surrounding areas, the core regions of Anuradhapura and Polonnaruva.

The study area divides into four major hydrological basins: the Kiri Oya basin in the east, which is the only one with natural water in the dry season due to a limestone band along the western edge of the basin; the Sigiri Oya basin in the north; the Mirisgoni Oya basin in the centre and the Dambulu Oya basin in the south-west. These basins form parts of the upper catchments of some of the major rivers of the island. They also formed the basic analytical units of our survey.

The archaeological knowledge of the Sihagiri Bim, before our first season of work in the field, encompassed primarily a relatively good understanding of the monastic remains of the region. The sites of Sigiriya and Dambulla had been subjected to research for a long time. The large monastic complexes of Ramakale and Pidurangala belong to the greater Sigiriya urban form. They were known archaeologically, though not in their

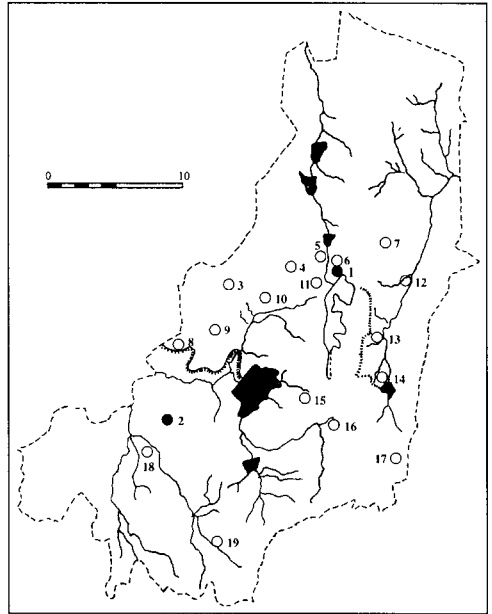


Fig. 2. The research area, roughly equivalent to the ancient Sihagiri Bim, but delineated by modern administrative boundaries. The four main hydrological basins are indicated by the rivers and their tributaries. A few of the major irrigation reservoirs in present-day use are marked in black. The abandoned ancient Sigiri Mahavava approximately at the centre of the map is not filled in. The main ancient feeder canal is marked to the east of it. The black dots are the major sites of 1. Sigiriya and 2. Dambulla. The unfilled circles indicate the major archaeological sites and the principal excavation sites of the SARCP: 3. Manavava, 4. Nagalavava, 5. Talkote, 6. Pidurangala, 7. Illukvava, 8. Enderagala, 9. Malasna, 10. Potana, 11. Ramakale, 12. Kosgaha-ala, 13. Dehigaha-ala-kanda, 14. Vavala, 15. Kaludiya Pokuna, 16. Kudagona vava, 17. Nuvaragal-kanda, 18. Ibbankatuva, 19. Kiralessa. Scale in km. (Map by the author.)

total extensions, and have also been subjected to archaeological research, most recently by a Sri Lankan-German project working at Pidurangala and Dambulla (Karg 1993; Kilian & Weisshaar 1994; Schultz 1993). Also a minor site at Talkote in the close vicinity of the Sigiriya urban complex was

known, as well as the medium-size sites of Enderagala, Kaludiya Pokuna, Kandalama and Vavala some distance away.

Apart from the strictly monastic sites, other locations known were the citadel-like site of Nuwaragalkanda in the mountains of the south-eastern end of our research area, and a probable “proto-urban” site at Malasna (both with considerable monastic remains as well). A small number of inscription sites were also known; the megalithic cemetery site at Ibbankatuva had just been discovered, and at two sites terracotta figurines had been found, Illukvava and the recently discovered Manavava (Manatunga 1990b; Nandadeva 1990: cf. Bandaranayake 1984:5, 8, 1990).

#### PODI MINISSUNGE PURAVIDYAVA

Our research strategy was clear from the very outset: take the societal apex sites into consideration, but concentrate the field effort on the societal base, the rural settlements surrounding (and supporting) the monumental sites. The concept of *podi minissunge puravidyava*, “the archaeology of the small people”, was adopted as a sort of catch-phrase of the project, and was imprinted through a translation into Sinhala of one of the project’s methodology texts (Mogren 1990).

As indicated above, this was more or less untrodden territory. With one minor exception, nobody had looked for such sites in the region prior to the outset of the project. The exception was Anura Manatunga of the Archaeological Dept. at Kelaniya University, the project’s first field director, who had been searching through parts of the area in the previous years, and who knew the region and many of its inhabitants. With his contacts as a point of departure, the first field season (1988) was spent on surveying and the second one (1989) on test excavations; not until the third season in 1990 did we undertake larger excavations. The 1988 fieldwalking was undertaken by a team of 12 students and Triangle officers headed by Anura Manatunga, Magnus Elfwendahl, Uppsala, and the

present author.

If we set up some limitations as to what types of sites to investigate from a societal point of view, the temporal limitations were nil; in order to understand the natural resource utilisation of the region as well as possible, we saw the necessity of encompassing both the Prehistoric and the modern periods. Stone Age research and ethno-archaeology became integrated parts of the total effort effectively from the 1989 season onwards.

The need for irrigation studies was evident from the very first reconnoitring trip to the study area, and was pursued by a team headed by Eva Myrdal-Runebjer of Gothenburg University (also responsible for the ethno-archaeology work) starting in 1989. During the course of the first two seasons however, an additional field of landscape utilisation grew into paramount importance, namely iron production studies. The region was found to be studded with bloomery slag, and apart from surveys for sites a larger excavation project was started with Rose Solangaarachchi of the PGIAR as the responsible Sri Lankan field director, with Svante Forenius, Uppsala, as main consultant, and with Gert Magnusson and Dag Noréus, both from Stockholm University, as special consultants. About the same time a parallel study of iron production commenced in the southern part of the island, at Samanalawewa (Juleff 1996), but before these two studies nothing much had been achieved archaeologically regarding iron production in Sri Lanka. In 1821 Dr John Davy, a British military physiologist and anatomist, described smelting furnaces still in use in Sri Lanka (1821, repr. 1983:195), and Ananda K. Coomaraswamy was able to record, in text and photographs, a still existing context of small-scale iron smelting as late as around the turn of the last century (Coomaraswamy 1908). Sir Richard Hadfield had studied older written accounts and summarised various metallurgical analyses of ancient iron objects (Hadfield 1912), but

nothing at all was known about the ancient iron industry and its processes. The two new projects have totally changed the archaeological landscape of Sri Lanka in this respect.

Thus the SARCP rapidly became a very multi-pronged effort. Such a research design has its obvious drawbacks; it is difficult to carry out really profound studies in any single field of research, but on the other hand, in many respects we were pioneers scraping the surface of an archaeological treasure-trove which will suffice for several generations of archaeologists to delve into. It was, after all, only a beginning and the project can be seen as the setting up of a few direction signs. Furthermore, the primary objective was to train young Sri Lankan colleagues in as broad a spectrum of settlement studies as possible, so in retrospect we feel that the project got an optimal structure considering the resources available to us.

#### THE SURVEYS

When we arrived at the area in the first season, one objective was immediately apparent: get acquainted with the landscape itself in order to understand the logic of settlement allocation. A total survey of the land was impossible for three main reasons: the sometimes impenetrable scrub jungles that covered vast areas, where eyesight could be reduced to 2–3 metres; the ongoing JVP insurgency, with some activity also in our area until 1990; and a substantial number of more or less aggressive wild elephants, that felt stressed by the growing pressure on their habitat from settlers. Systematic sampling strategies have been very popular for decades in the aftermath of the New Archaeology, but we who were involved in the Sihagiri Bim surveys did not believe in the method as a means of understanding the landscape; any given area must be visited and revisited *in extenso* and recorded continuously to be fully understood. Had we believed in the method, it would still have been unfeasible for the same reasons as mentioned above.

A “village inquiry unit” was formed, which gathered basic information on the *purana* (old, traditional) villages of the area from the inhabitants. Also the labourers at the Cultural Triangle Project at Sigiriya were a very valuable source of information, being part-time peasants from the vicinity. Some of them were temporarily employed as our labourers and functioned primarily as guides. Thus, in short, our growing understanding of the area was to a great extent built on local knowledge.

During the course of our first seasons at and around Sigiriya a number of previously unknown minor monastic sites were found, especially in the little known Kiri Oya basin. The larger sites of Ramakale and Pidurangala proved to be not so well known after all. The full extent of the complexes became apparent only after detailed surveying and mapping in very dense jungle. Each covered around 1 km<sup>2</sup>, and the Ramakale complex was found to have about 120 stone-built structures (Bandaranayake 1994:16ff).

A survey for inscription-sites, which developed into a qualitative field-epigraphy, was pursued by our 1989 field director Raj Somadeva. Many inscriptions were previously known and even published, but Somadeva put the whole corpus together and managed to add a substantial number of previously unknown records, making estampages and rereading the texts. The entire corpus finally consisted of nearly 300 lithic records (Somadeva 1994). His data can be used in many ways; the spatial distribution of the sites, with many relatively small sites in the early period and just a few large ones in the Middle Historical Period, may be interpreted to mirror a development of growing societal complexity, and perhaps one can even see a vague reflection of Sri Lankan state formation. The site distribution is in itself also a rough settlement pattern.

Even after the main fieldwalking program was halted after the 1989 season, surveying for iron production sites continued through

the 1992 season, with quite impressive results (see below).

Our main quest was for village sites. These were delimited archaeologically by the occurrence of pottery, and one method of looking for them was simply to ask the settlers in the area for *valan katu*, potsherds. These part-time swidden cultivators know their area very well so this method immediately yielded substantial results, and combined with our own fieldwalking the results sufficed for several seasons of follow-up work, some of it still to be carried out.

In Sri Lankan historiography the concept of the dry zone village has been a fairly uncomplicated matter. According to the established canon, and in generalised terms, the nucleus of the village was the irrigation tank, the *vava*, around which village life revolved both temporally, in the yearly monsoon cycle, and spatially. The settlement, the *gamgoda*, which in early modern (Kandyan and colonial) times was clustered or nucleated, a *gammandiya*, was usually placed at one end of the tank bund. Connected to the village could be a small *pansala*, a Buddhist temple. Below the tank were the paddy fields for wet rice cultivation, and in the higher ground around the village was the jungle with the chena (*hena*) fields for swidden cultivation of millet, legumes and other rain-fed crops. A one-tank-one-village system was taken for granted (cf. Perera 1978).

Our potsherd search taught us already in the first few weeks of the first season that reality was far more complex than the model. In the eastern basin of the Kiri Oya, where the major part of the 1988 surveying took part, there were relatively few tanks but a large number of pottery sites. Most of them were clustered around the confluences of the smaller streams fed by the limestone band, and the Kiri Oya itself. In every second cluster or so was found a minor monastic site, almost according to a modular pattern, the majority of which were known to the local peasants,

but unknown to the archaeological community (Manatunga 1990a).

We had no means of checking on the apparent modular pattern through test excavations and datings, due to the great number of sites found, so the pattern still remains hypothetical. The surveys were done in the pre-GPS era, so even the plotting is sketchy, but the single sites are really of minor importance. The primary lesson taught is that of numbers, of possible settlement patterns which do not conform to the taken-for-granted models, and certainly also of the enormous potential inherent in the rural settlement archaeology of the region. *In toto* 195 sites were registered during the first four years of fieldwork, of which all but a few were previously unknown. About half of these were regarded as settlement sites indicated by a scatter of potsherds. Only a handful of the pottery sites were regarded as being urban in character; the others belong to a sedentary agricultural context.

In 1989 the political unrest came even closer than the year before, so we decided not to leave the immediate vicinity of Sigiriya and its relative safety. This is the main reason why large areas in the northern and southern outskirts of the research area remain unsurveyed. Instead we wanted to check on the one-tank-one-village model on a minor scale, targeting the area belonging to a single village. We chose Talkote, adjacent to the Sigiriya archaeological complex on the north-western side, and the working area of this special survey comprised ca. 8 km<sup>2</sup> (Mogren 1994).

Talkote had been a cluster village into the 20<sup>th</sup> century, and its *gammandiya* was clearly distinguishable. Into the 19<sup>th</sup> century there had been two villages, Ihala (Upper) Talkote and Pahala (Lower) Talkote (Lawrie 1898). There were a few stone pillars and a ruined stupa from a minor monastic complex, and there were a number of irrigation tanks. Two of them were in regular use, the *Ihala vava* and the larger *Pahala vava*. Combined with

the number of abandoned and intermittent tanks of the village the total number amounted to seven, however, and when delving deeper still into the problem, there was also a complementary system of minor reservoirs called *vav-kotu* and *amuna* by the local villagers, which were the concern of only 1-3 families (Myrdal-Runebjer 1994a:167).

The archaeological record of the village grew even more complex when, in addition to the *gammandiya*, a large number of pottery sites were found, some of which conformed to the *gamgoda* model, some of which did not. (In fig. 3 sites SO 5, 6 and 32 are good examples of settlement sites in *gamgoda* position, while sites like SO 3, 36, 37, 50 and 55 diverge from the model.) The archaeological record of this small village contains 56 sites, of which 12 seem to belong to the contexts of urban Sigiriya and seven to the

context of the Pidurangala monastery. One is a strictly Mesolithic camp-site (while other sites with lithic remains also have later strata with pottery and are designated as sedentary settlement sites in this context). The remaining 36 sites posed a number of important problems for the field team. Which of these pottery sites were real sedentary settlements, and which were just waste at the site of a field hut? Which were contemporaneous?

When studying the older topographical literature, another source-critical problem becomes apparent. The English sailor Robert Knox, who was captured and detained by the Kandyan king for almost two decades, 1660–1679, indicated that there was a certain lack of settlement stability in the Kandyan kingdom; the villages could be moved frequently for various reasons such as occurring illnesses (Knox 1981:353; also quoted in Myrdal-

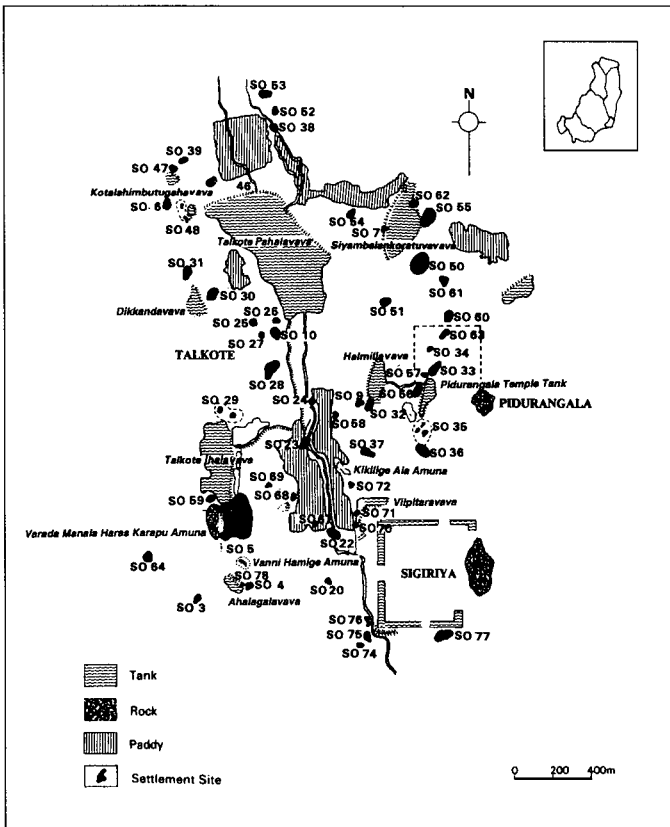


Fig. 3. Site map of the Talkote survey. Note the close proximity to the Sigiriya complex in the south-eastern corner in the south-eastern corner in the south-eastern corner and the Pidurangala temple grounds (= area within dashed square to the east). (Map by PGIAR Cartographic Unit. Courtesy of PGIAR, Colombo.)



Runebjerg 1994c:249). Hypothetically a cluster of pottery sites could represent just one residential group and only a few generations.

The oral history of Talkote was rather meagre; anything older than living memory was termed as “before three generations” or from “ancient kings’ times”, very large trees were always “300 years old” etc., but there was one thing of which the inhabitants were certain: the village site before the establishment at the last *gammandiya*. It was pointed out to us, situated in a *gamgoda* model position adjacent to the western end of the *Pahala vava* bund (SO 6 in fig. 3), and the area was strewn with potsherds, some with a fairly “modern” appearance, and there was even an old tamarind tree, indicative of a village centre. These facts, in combination with annotations by Archibald Campbell Lawrie (1898), indicated that it had been abandoned sometime during the 19<sup>th</sup> century.

#### THE EXCAVATIONS OF RURAL SETTLEMENTS

The complexity of this area called for test excavations, and a few probes were carried out during the 1989 and 1990 seasons. In Talkote a total number of 10 2 x 2 meter pits were dug in the very hard soil of the dry season, using pick-axes as the main implement. Three pits were dug in the *pansalvatta* (SO 10 in fig. 3), the grounds of the small village temple where there were also ancient monastic remains; two were dug in the *gammandiya* (SO 28); three in a large pottery site at the southern outskirts of the village, called Tammanagala after a low rock nearby (SO 5); and two were dug by the streambed of the Sigiri Oya, where potsherds had been found.

The test excavations in the *pansalvatta* yielded an ancient brick wall and tile debris. They taught us that a temple at the site (of which a number of stone pillars were previously known) had been abandoned after the 11<sup>th</sup> century.

The *gammandiya* excavations yielded

finds such as gun cartridges, a slate pencil and modern pottery, but nothing thought to be considerably older than Lawrie’s mention of Ihala Talkote.

The conclusion is that the *gamgoda* model is not incorrect, but it is not the entire story either, and that the oral history of Talkote has some basis, that the shift from Pahala Talkote to the present location was a gradual process during the 19<sup>th</sup> century. It does not explain all the other *gamgoda* sites at the other tanks, however, and it does not explain the number of monastic sites in the vicinity (there are eight of them, SO 9, 29, 30, 51, 53, 54, 62 and 64, excluding the present *pansalvatta* cluster of ancient remains, SO 10, 25–27). Three of these monastic sites are solitary stupa ruins, SO 9, 53, 64. These sites can not be connected with the royal presence at Sigiriya, at least not all of them. One of the stupas had a brick with two letters ascribed to the 7<sup>th</sup>–8<sup>th</sup> centuries.

The Talkote research did not give the area a history, but it resulted in an understanding of the complexity of settlement patterns in the Sri Lankan dry zone, and provides a word of caution with regard to future work (Mogren 1994).

The Tammanagala test pits gave us quite another testimony. The large pottery site SO 5 in a model *gamgoda* position at one end of the Ihala vava bund, yielded enough ancient pottery to prompt a decision to start a larger excavation at the site. This was carried out in the 1990 season when 200 m<sup>2</sup> were investigated. This, together with the contemporary PGIAR-KAVA preliminary investigations at Ibbankatuva (see below), was the first excavation of a rural settlement site in Sri Lanka and must be seen as truly exploratory, not least methodologically.

Excluding a few lithic finds that indicate a Mesolithic presence at the site, the stratification, the radiocarbon datings (albeit very few) and the artefacts showed three phases of settlement. Black-and-Red-Ware (BRW) pottery and a 3<sup>rd</sup> century AD dating indicates

an Early Historic phase. The main phase at the site as indicated by the quantity of artefacts was dated to the 5<sup>th</sup>–6<sup>th</sup> centuries AD. This could coincide with the brief royal phase at Sigiriya (AD 477–495), and it is possible to discuss the site in terms of a suburb. A 9<sup>th</sup>–10<sup>th</sup> centuries AD dating in the uppermost stratum shows that some activity had taken place there also after the royal period (Somadeva & Kasturisinghe 1994). The difficulties with this kind of site were apparent; the ground was quite hard and unfavourable for the preservation of organic remains. Also, in the upper strata, disturbances from later chena (swidden) cultivation had destroyed the stratigraphic sequence.

These first experiences of Sri Lankan village archaeology were further developed in 1991 in the excavation at the Ibbankatuva-Polvatta settlement site. It is situated ca. 3 km south-west of Dambulla, between the bank of Dambulu Oya and the small mountain of Punchi Dambulla Kanda. The settlement is connected to the megalithic cemetery site of Ibbankatuva, situated ca. 500 m west of the settlement and partly excavated within the framework of the PGIAR-KAVA (Sri Lankan-German collaboration) program. Also some test excavations at the settlement site had been undertaken within this program.

Sri Lankan archaeology has until recently applied excavation methods developed decades ago. Several of the large-scale undertakings within the Cultural Triangle framework have, all through the 1980s at least, applied the “box-method” used by Sir Mortimer Wheeler at Arikamedu and other sites in the 1940s. Different varieties of planum excavation are unfortunately still in use. The SARCP did not feel obliged to adjust to this situation. Thus it was natural for the SARCP team, under the field directorship of Priyantha Karunaratne, to improve on the methodology used in the previous fieldwork at Ibbankatuva-Polvatte, by applying a strict contextual excavation and the Harris matrix, instead of the planum digging used earlier (Karunaratne

1994a:105). Eighty square meters were opened.

The results were quite exciting. Ibbankatuva-Polvatte proved to have two main phases of settlement. There are no transitional forms between the two, but according to the excavator there seems to have been a more or less continuous occupation at the site. The earlier phase belongs to the Protohistoric period, 4<sup>th</sup>–3<sup>rd</sup> centuries BC, and is the phase contemporaneous with the megalithic cemetery close by. It is the first Protohistoric rural settlement excavated in Sri Lanka. In this phase were found several types of carnelian, onyx and terracotta beads, a few copper and silver items, well-made Black-and-Red-Ware (BRW) pottery and even the remains of a pottery kiln.

The younger phase has only a very small amount of BRW pottery. Instead the dominating redwares were found together with a resin-coated buff ware which is a Persian import, fine grey ware and graphite-coated pottery. Among other important artefacts were glass beads, glass bangles and iron slag, notably a bottom slag from a bloomery furnace. Radiocarbon datings from the upper strata of this phase gave ca. 5<sup>th</sup> century AD (Karunaratne 1994a).

One of the major problems of Sri Lankan settlement archaeology is the lack of a reliable and easily applied ceramic sequence for the entire period under study, that is, approximately the last three millennia.

For the centuries around the beginning of our Western time-reckoning there are some very diagnostic wares, such as the BRW, and the blackwares etc., but for most of the 1<sup>st</sup> millennium AD there is mainly a ceramic complex consisting of still rather undiagnostic redwares. A laudable attempt to sort it out was made by the Czech scholar Martin Kuna in the 1980s (Kuna 1987), but his classification, based on rim-types, is complex and difficult to use, so there was still a lot to be achieved in this regard when the SARCP was at work.



*Fig. 4. The Mapagala great retaining wall before excavation. The team members are standing just over the site of the trench. Photo: Mats Mogren.*

The investigations of the long-running Anuradhapura Gedige (citadel) excavation project have as one objective to establish a revised pottery chronology (Deraniyagala 1986:44). This is an important project for Sri Lankan archaeology as a whole, and with 9 meters of deposit or more, the potential for establishing a practicable pottery chronology is great at this site. Few tasks of Sri Lankan archaeology are more important than the publication of these results. It will give an urban sequence, though, and this must be checked against rural contexts to be fully applicable. With our rural setting we had to suffice with the overarching knowledge of ceramics obtained earlier by individual team members at, for example, Anuradhapura.

In our project we made only a very crude seriation of wares from some of our sites, in order to grasp the basics of our sequences (Bandaranayake & Mogren 1994:37–38 and *passim*). The results of this test were of some use for the understanding of the stratigraphy at both Ibbankatuva-Polvatte and Mapagala (see below).

The pottery and small finds from both

phases indicate that Ibbankatuva-Polvatte must be regarded as a settlement with strong elite connections. The Dambulla temple, established some time around the transition between the two phases, is visible from the site, and is probably a very important factor for understanding the settlement, but also the pre-Buddhist megalithic context has elite traits. The fieldwork and subsequent analysis carried out by Karunaratne and his colleagues has established this site as one of the more important archaeological finds in the country, especially as the Protohistoric/Early Historic transition is one of the most debated periods of Sri Lankan history.

#### THE EXCAVATIONS IN THE SIGIRIYA COMPLEX

Even though the main emphasis of the project was on the rural settlement around Sigiriya and Dambulla, some excavations were carried out also in two relatively unknown parts of the Sigiriya complex itself. The objective was to check on the possibility of non-monastic elite structures before the time of the royal presence, and to get at least a preliminary

impression of the nature of urban habitation. Starting with test excavations in 1989, the investigations continued in the following seasons on a slightly larger scale.

One of the enigmatic features of the Sigiriya complex has been the citadel-like structures of Mapagala. Mapagala is in fact two adjacent rocks, divided by a small crevice, about 400 meters south of the Sigiriya complex proper, with a number of ruined structures, most notably an encircling retaining wall of "cyclopean" proportions, which creates a terrace around most of the northern and western base of the rocks (fig. 4). In its preserved state it is up to 4 meters high and built of undressed stones up to 2.5 x 2.5 meters in size. The Mapagala rocks were once part of the bund of the ancient Sigiri Mahavava, and the water of the tank lashed the eastern side (see below). The whole site measures about 250,000 m<sup>2</sup>.

Earlier dating suggestions for the wall span from the megalithic period (ca. 1000–300 BC) up to the period of royal presence at Sigiriya (477–495 AD), and comparisons have been made with both South European and South American "cyclopean" walls (see review in Kumaradasa 1994:115).

A modern mapping of the entire area was carried out by the SARCP team; the earlier mapping was done by H.C.P. Bell in 1907 and found to be inadequate for our purposes. Two test pits were dug on the summit of the northern rock. One did not yield any results, but the other one, which was dug in a shallow depression in the rock where debris had been washed down and imbedded in alluvial layers, yielded evidence that the rock summit had been used by both a Mesolithic group of people and later by a community using Proto-/Early Historic BRW pottery (pre-4<sup>th</sup> century AD).

Immediately adjacent to Mapagala on the southern side, just where the constructed Sigiri Mahavava bund starts anew, two more test pits were dug. The most important results from these pits were the clear evidence of the

Mapagala retaining wall being older than the vava bund, and the existence of a settlement site that predates the bund. Its cultural deposit contained black ware and an unidentifiable Roman copper coin.

In 1990 the great retaining wall was trenched in order to date it. A thorough stratigraphic analysis was carried out (the excavation was in fact used as a field workshop in the use of the Harris matrix) and a number of radiocarbon datings showed that the wall had been built after cal. 306–517 AD (Ua-5220; 1σ), but before cal. 432–550 AD (Ua-5501; 1σ). Thus it could very well coincide with the short period of royal presence at Sigiriya during the reign of Kasyapa I (477–495 AD). The earlier of the two radiocarbon datings is from a cultural deposit predating the wall. It had a fair amount of redware and only a small amount of BRW. There was also some iron slag in the layer (Kumaradasa 1994).

The Mapagala excavations taught us that the immediate area around the Sigiriya complex had remains of habitation from both the prehistoric period and (probably continuously) from the last centuries BC on, that the great wall could be a work from Kasyapa's time, and that the wall is older than the tank bund of Sigiri Mahavava. All these facts are very important pieces in the jigsaw puzzle of Sigiriya.

The Eastern Precinct of the Sigiriya inner city, a walled area east of the Sigiriya rock measuring ca. 800 x 500 meters, has been thought to be the habitational area of the city population. In order to check on this a few test pits and larger trenches were excavated. The responsible field director, Priyantha Karunaratne, summed up the results from these probes in an article that gives quite a different view of the site (Karunaratne 1994b).

Some Prehistoric and Protohistoric presence within the Eastern precinct was recorded at the very large boulder Aligala, but there was nothing or very little within the inner ramparts from the period of royal presence

during Kasyapa's reign. The settlement traces from that period were instead found north of the Eastern precinct, between the inner and outer ramparts and outside the outer rampart. Hence the idea was born that the Eastern precinct had functioned as a ceremonial park with an axial layout just like the pleasure gardens west of the rock, and with a large ceremonial pavilion at the centre of the precinct (fig. 5).

During the explorations in the area, the nature of "breaches" in the northern and southern ramparts were understood. They were in fact gateways leading into the park from the Inner City habitational areas. Next to the northern gateway a probable ritual building of some kind was excavated, the only structure in the Sigiriya complex with stone pillars (Karunaratne 1994b).

A lot of work remains to be done regarding the investigation of the Eastern Precinct,

but the work by Karunaratne has provided future researchers with a well-founded hypothesis about this neglected part of the ancient city.

### IRON PRODUCTION STUDIES

Sites designated by the occurrence of iron slag were registered from the very first day of fieldwalking in 1988, but it was after the discovery of a site situated in the southern Kiri Oya basin, 8.5 km south-east of Sigiriya, near the village of Alakolavava (Manjusri 1990), that it became obvious to us that a certain emphasis must be given to iron production studies in order to understand the ancient landscape surrounding Sigiriya and Dambulla.

The site, a low rock close to the perennial Kiri Oya tributary Dehigaha-ala, had on its western slopes about half a dozen very large slag heaps. The largest one measured around

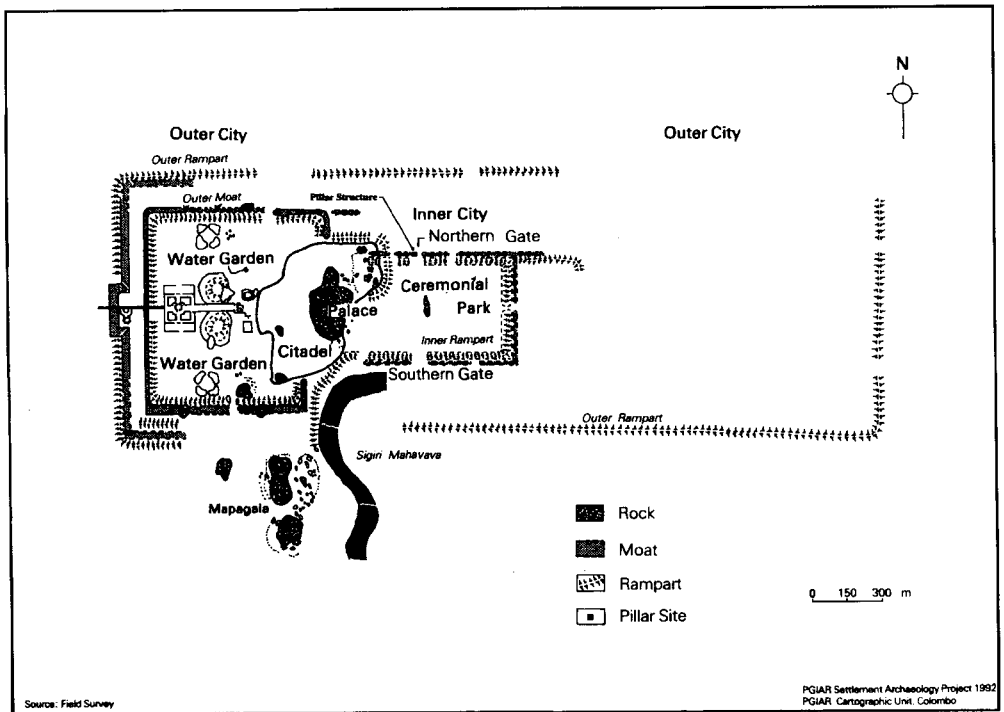
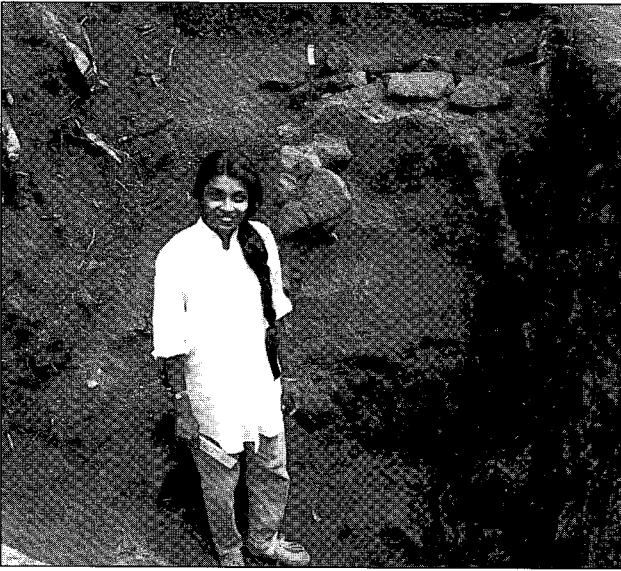


Fig. 5. Interpretative map of the Sigiriya complex including Mapagala and part of the Sigiri Mahavaya, according to P. Karunaratne. (Map by PGIAR Cartographic Unit. Courtesy of PGIAR, Colombo.)



*Fig. 6. The field director of the Dehigaha-ala-kanda excavations, Rose Solangaarachchi, standing by the best preserved smelting furnace. Photo: Mats Mogren.*

55 meters in length and around 4 meters in height. This was an iron production site of industrial proportions. In 1990 and 1991 a number of trenches were excavated and five furnaces were discovered, four of which were meticulously excavated by Rose Solangaarachchi, Svante Forenius and their team (Forenius & Solangaarachchi 1994; Solangaarachchi 1995).

The furnaces were of surprisingly large dimensions. They measured 0.8–0.95 meters in width at the bottom, were more or less bottle-shaped and originally about 2 meters high. The best-preserved one had a back wall standing 1.6 meters high (fig. 6). They were constructed in carved-out pits in the bedrock, about 1 meter deep. The most astonishing fact about the furnaces, though, was the solution of the problem of air supply. Close to the bottom of the rectilinear front walls, eight cylindrical tuyeres made of a special heat-resistant clay and lying close together like organ pipes guaranteed the highest possible accuracy in temperature control during the smelting process. The air was supplied by bellows. The natural draught process documented by Gillian Juleff at Samanawewa in southern Sri Lanka, both archaeologically

and through experiments (Juleff 1996), has not been used at Dehigaha-ala-kanda.

The smelting at Dehigaha-ala-kanda was indeed high-tech, and the gain must have been enormous. It is not easy to calculate the output of the production, but it could have been measured in tens of thousands of tons of raw iron. The ore used has also been found at the site, a very pure magnetite, which must have necessitated some kind of flux. Which one is unfortunately not known, so chemical calculations are difficult, in spite of our familiarity with the ore, the clay and the slag.

The site has been dated by means of both pottery and radiocarbon datings. The pottery spans the time from the Protohistoric/Early Historic transition (ca. 3<sup>rd</sup> century BC) until about the 4<sup>th</sup> century AD. It is partly very reminiscent of pottery from Anuradhapura, and consists of coarse BRW, fine black ware and red ware. The radiocarbon datings more or less confirm the pottery datings, and the production can be said to span from at least the 1<sup>st</sup> century BC until the 4<sup>th</sup> century AD, in other words it is pre-Kasyapan (Forenius & Solangaarachchi 1994).

At the Dehigaha-ala-kanda site one riddle of Sri Lankan archaeology seemed to get its

solution. At many locations on the island conical holes with smooth inner faces have been carved in solid rock. At Dehigaha-ala-kanda they are 15–20 cm in diameter and of various depths up to 15 cm. Henry Parker (1909, repr. 1984:221–234) was among the first to take notice of these features, and he interpreted them as connected with the activities of the stone masons in building monasteries. In the first season of the SARCP it was observed, however, that there is a spatial connection between such conical holes and the occurrence of iron slag (Mogren 1990: 58–59). Around the holes are found pieces of ore, and it can be conjectured that the holes have something to do with a grinding process, perhaps being formed by a revolving grinding machinery. In the following fieldwork seasons many more sites were found which further strengthened this assumption.

The Dehigaha-ala-kanda site is not entirely unique in the region. Another three known sites can also be considered as being of industrial proportions: one site at Kosgaha-ala ca. 6 km east of Sigiriya; one at Kudagona vava ca. 11 km south of Sigiriya; and one at Kiralessa in the southernmost part of the research area ca. 22 km south-west of Sigiriya. In addition to this there are a number of sites of more humble proportions. Up to and including the 1992 field season a total of 46 sites had been found which showed evidence of iron processing: furnace walls, smelting slag, forging slag, conical holes and/or crushed magnetite (Karunaratne & Mogren, unpubl.). There are no datings from these sites, except for Ibbankatuva-Polvatte, where iron smelting was documented from the Early Historic phase (4<sup>th</sup>–5<sup>th</sup> centuries or slightly earlier) (Karunaratne 1994a). To summarise the data, it is clearly evident that the region was a very important iron production area, at least during the first half of the first millennium AD. It is not an exaggeration to say that the production of the Sihagiri Bim, and of other iron-producing areas of Sri Lanka, must have been of importance for the world-

system of the Indian Ocean. Sri Lanka has become one of the more conspicuous dots on the world map of ancient iron production.

#### IRRIGATION STUDIES

The key feature of pre-modern society in the Sri Lankan dry zone is undoubtedly the irrigation systems. Without them the population of the area would have had to rely on swidden cultivation, which could not have supported as many people. Without irrigation the complexity of ancient society in the Sihagiri Bim as we know it would have been unthinkable.

Irrigation systems can be grouped into two main categories. The first, also in the chronological sense, is paddy cultivation based on village tanks, that is, reservoirs constructed and maintained within the framework of the single village, or in co-operation with neighbouring villages. These tanks were productive enough to support also a few non-food producers and to have been used from the introduction of irrigation in the 1<sup>st</sup> millennium BC to the present. The second is paddy cultivation based on a macro-system, with larger tanks and trans-basin feeder canals ensuring a more steady water supply. This will support a larger population in a given area and also a larger group of non-food producers (Myrdal-Runebjerg 1994a, 1996: 40ff, 195f).

After initial map studies and field surveys it became apparent that all tanks in the Sihagiri Bim, except for one, were of the former type, with all the implications that has for uncertain yields and dependence on auxiliary swidden cultivation. The exception is the medium-sized Sigiri Mahavava, the bund of which extends from the base of the Sigiriya rock and 7.8 km southwards. The Mahavava does not have an optimal topographical location; it has a very small catchment area and needs a connection to neighbouring basins, an observation made already at the end of the 19<sup>th</sup> century by Blair (1898).

Within the SARCP framework, Eva

Myrdal-Runebjer and her team undertook to map, level and describe this system, which was very poorly understood prior to the project. She focused on the function, dating, construction techniques, and, perhaps most important, the potential of production and labour investment. During a five-season program, test excavations and extensive surveys yielded results that together form a much clearer picture of the macro-system.

It was found that the bund extended much further south than Blair had realised. It was also found that there are three supply canals, two of which are intended to lead water from the neighbouring basins, not only from the Kiri Oya basin but also, through the tank bund's connection with Vegolle vava, from the Mirisgoni Oya basin. The labour input was enormous, but the total data set shows that the system was never completed as a functional entity. The available datings give the late 5<sup>th</sup> century AD as a *terminus post quem* for the system, that is, it could very well have been initiated during the short reign of Kasyapa I at Sigiriya. "The unfavourable location of the transbasin system indicates that it was built in a conscious attempt to increase the agricultural production in an area that had become important in other respects", Myrdal-Runebjer writes in her dissertation (1996:197), in a sentence that elegantly sums up the results of the sub-project.

When the dissertation was defended in Gothenburg in January 1997, the opponent Maurizio Tozi called the Sigiri Mahavava investigations "the archaeology of a dream", a dream that was never realised. As such it has an interest to the researchers of ancient society, but when reading the dissertation it is also interesting to note, almost as an innuendo, that the villagers managed very well without it. After the interrupted attempt to create a transbasin system with relatively unfavourable prerequisites, parts of the long bund were used for village tanks, and still are as is the case with the present, much smaller, Sigiri vava and the Kayanvala vava.

## PREHISTORY

There is no zero-point in human history, so a deep temporal perspective comes natural in a project which has the objective to investigate the settlement history of a given region. Sri Lankan Stone Age research has proved the existence of Stone Age foragers on the island from at least ca. 40,000 years BP. There are even datings that seem to be pushing the oldest Prehistory back to ca. 125,000 BP. (In Sri Lanka the term Prehistory is equivalent to Stone Age, and it is in fact mostly a Mesolithic culture that is described, with very early dates for geometric microliths. No clear Neolithic has been discernible so far in the Sri Lankan record, but there is still room for new discoveries, so it can not be ruled out entirely.) These old dates come from the central highland regions of the island and the western and southern foothills. The plain north and east of the highlands (the dry zone) had been neglected by Prehistory researchers, and it is only from the outset of the SARCP that problem-oriented studies have been initiated, conducted by Gamini Adikari, who during the course of the project and in its aftermath has collected substantial and valuable data which enable him for the first time to describe the dry lowland Mesolithic (Adikari 1994a).

Just prior to the project some evidence of Mesolithic camps was found in the rock shelter excavations of the PGIAR-KAVA project at Pidurangala and Dambulla. Mesolithic sites were also discovered through hearsay, for example from people involved in construction work at monastic sites. This was the case at the very important site of Potana, situated ca. 4 km west of Sigiriya. During the SARCP work of the 1989 season, Mesolithic remains were found at three excavation sites where investigations were pursued with other objectives: the open-air sites of Tammannagala and Mapagala (see above) and at the small rock shelter of Aligala, within the Eastern Precinct of the Sigiriya complex and at the base of the



Sigiriya rock itself.

In 1990 Aligala became the site of the first problem-oriented excavation of a Prehistoric deposit, larger than a test pit, in the dry zone lowlands. Sixty-four square meters were investigated, and the Prehistoric deposit proved to be up to ca. 80 cm deep. It was covered with Protohistoric and Early Historic layers. Both bone and stone (chert and quartz) implements were found. The microliths had both geometric and other forms.

The ecofacts found were equally important. A number of large and small mammals had been part of the diet, as well as monitor lizards. Of the five mollusc species found, three are today encountered only in the wet zone. The same is true for the *dik kakuna* plant (*Carnarium* sp.), of which charred seeds were found in the deposit. These facts have raised questions regarding possible climate shifts. On the other hand red ochre and graphite, found in the layers, does not occur naturally in the region either, so the explanation might be that the foragers of Aligala had long-distance contacts with the wet zone (where graphite is found and

mined), if they did not shift location themselves following the monsoon seasons. The Mesolithic deposits were radiocarbon dated to the 3<sup>rd</sup> and 4<sup>th</sup> millennia BC (Karunaratne & Adikari 1994).

In the following season the main cave at Potana was targeted for excavation. The site is in fact a cluster of 12 rock shelters in a gneiss-granite outcrop, in which a monastic establishment was planning to expand with new buildings. The excavation was, therefore, a rescue operation. The main cave measures ca. 100 m<sup>2</sup>, of which 93 m<sup>2</sup> of the 1 meter deep deposit were excavated (fig. 7). In addition to this a 5 m<sup>2</sup> test pit was excavated in a neighbouring rock shelter. From this excavation ca. 1000 kg of faunal remains were retrieved in addition to numerous lithic artefacts. Most exciting, though, was the discovery of Mesolithic burials; two complete skeletons (the first intact ones found in Sri Lanka) plus numerous disturbed skeletal remains. The radiocarbon dating of the Potana deposits concentrate to the early 4<sup>th</sup> millennium BC, but the skeletons are slightly older (Adikari 1994b).



Fig. 7. The excavation of the Mesolithic rock shelter at Potana. Photo: Mats Mogren.

## ETHNOARCHAEOLOGY

Analogy has been the foundation of archaeological interpretation ever since we stopped believing that stone axes were thunderbolts. We would understand very little of past contexts if we could not make comparisons with what we know from the present. The ethnoarchaeology of the SARCP did not confine itself to mere analogies, however. It was an attempt to gain knowledge about the “material requirements of reality” (Myrdal-Runebjer 1994b:227). Aspects of seasonal planning, labour investment and return, and the socio-economic implications of this were in focus. The emphasis was on the household and its food procurement.

The studies carried out within the SARCP framework, initiated and supervised by Eva Myrdal-Runebjer, were an introduction only; the task of documenting the entire field of contemporary “traditional” household-related work is enormous and some of the objectives fell far short of the ambition. In spite of this quite a lot was achieved, so much in fact that it is difficult to summarise here. We were greatly helped by having one team member who combined an academic background in archaeology and a profession as school-teacher, with being a part-time farmer himself from the area; Anura Yasapala of Talkote contributed not only his own first-hand knowledge, but he also conveyed contacts with other farming households of the region.

The seasonal cycles were documented for several households in different villages, and the food procurement techniques including ethno-botany, storage, housing, the tools and the measurement systems were given attention, as well as the “archaeological visibility” of all this and the taphonomical processes involved. The data could be grouped into two technological complexes: wet-rice cultivation with animal husbandry and some fishing in the tanks, and swidden cultivation with hunting and trapping. These are of course abstract categorisations, and in reality there are always found combinations of the two.

A great deal of effort was put into the documentation of trapping, hunting and fishing. It was found that the economic role of trapping in the modern peasant society of the region is far from negligible. Chena fields attract wild animals and a number of ingenious devices for trapping them are in use, specially constructed for each species (Myrdal-Runebjer 1994c).

Of special importance for settlement archaeology and especially for the excavations of rural settlements, were the studies undertaken regarding traditional housing. These were carried out mainly in Talkote and Nagalavava villages. The latter still had parts of a clustered *gammandiya* intact (fig. 8), the houses of which were documented in plan and elevation. Special attention was paid to “archaeologically visible” features like the position of the *kurakkan gala* (millet quern), the *miris gala* (chilli grinding stone) and the *katta gana gala* (a big permanent whetstone for sharpening tools). Taphonomic processes were approached by documenting recently abandoned dwellings (Myrdal-Runebjer *et al.* 1994).

With all the source-critical implications observed, the ethnoarchaeological studies helped a lot in understanding the past contexts. When working in a still partly “traditional” (which does not mean static) setting, as we did, there is every reason to bring settlement archaeology up to the living present. The food procurement strategies of the present are not fundamentally different from the past, and in the case of housing there is reason to believe that similar techniques and similar uses of space have been in use over a very long period of time. Most important perhaps was the insight gained into several source-critical aspects of settlement, that might have escaped us if we had been working in a more “modern” setting.

## A PROJECT IN RETROSPECT

The project was rounded up in 1994 with the publication of the second project volume and



Fig. 8. The remaining part of the Nagalavava gammandiya. Photo: Mats Mogren.

with a conference in Colombo attended by Sri Lankan and Swedish scholars, also from outside the project group. Some lingering tasks were completed in early 1995.

We learned from working in the Sihagiri Bim that Sri Lankan settlement archaeology is a fountain of archaeological wealth, once you open the field to research. We were so overwhelmed by the amount of data lying before us that we quickly realised the impossibility of grasping more than just a fragment of it within the limitations of our project. It was frustrating and exciting at the same time. One example could be the amount of pottery retrieved from a single excavation of a rural settlement, such as Ibbankatuva-Polvatte. It measured in tons. We did not expect that. How does one deal with such abundance?

Another example could be the number of sites; so many were found in just a few days of fieldwalking that plotting and documentation became a major problem for us.

Merely scraping the surface did not conceal the fact that we were able to problematize a few taken-for-granted concepts, such as the one-tank-one-village model. The notion that

reality is always much more complicated than the most elaborate model, was hopefully implanted. Also in the temporal dimension a few puzzle pieces were put into place. Mapagala and Sigiri Mahavava were fairly well dated and can now be discussed in the Sigiriyan context with better foundation. Socially the concept of the centralist polity could be questioned, even though no other well-founded societal structures could be presented with the data at hand. In the economical sphere the studies of iron production, irrigation and food procurement meant great leaps forward.

One thing we did not solve, a problem that occupied our thoughts all through the project, was the so-called collapse of the Rajarata civilisation. With this is understood the apparently sudden disintegration of the Anuradhapura/Polonnaruva polity in the 12<sup>th</sup>–13<sup>th</sup> centuries (cf. Liyanagama 1968; Indrapala 1971). We saw traces of destruction and abandonment in the archaeological record – e.g. at Talkote *pansalvatta* where the brick building documented apparently was destroyed after the 11<sup>th</sup> century – but we were not able to contribute anything to the solution

of this great problem complex. This is certainly a worthy objective for a large-scale project of the future, a project with much more resources than we had.

The ones to do it are possibly the group of young Sri Lankan archaeologists that got some of their training in the SARCP and who now form part of the core of Sri Lankan archaeology. About 100 students passed through the project during the years in the field. About 20 % of them have acquired positions in the archaeological infrastructure of the country. Others have become teachers or joined other professions where they contribute to the general understanding of archaeology. A number of M.Phil. dissertations have been completed or are just being completed, and Ph.D.s are under way. During the project period a cartographic and photographic unit was built up at the PGIAR, producing beautiful maps and pictures. The skills of editing and publishing were gradually acquired through contributions by a number of persons. With the help of Urve Miller and Jan Risberg at the Institute of Quaternary Geology at Stockholm University, a paleobotanical know-how gained a foothold at PGIAR. The project can claim to have contributed at least a bit to the development of personal resources in Sri Lankan archaeology, but we also brought with us back to Sweden insights that have become useful, not to say fundamental, for some of the work that is being implemented here today.

We who were involved in this quest for knowledge, spent a great deal of our youth or early mature age in the jungles and small *purana* villages of the Sihagiri Bim. In spite of all the problems, fears and sorrows of those years, we sometimes think back longingly, Swedes and Sri Lankans alike. Today the Sihagiri Bim is rapidly changing. Some of our sites are destroyed by "development" or the establishment of new settlements, others are threatened. The privilege of having been part of the very first steps into the untrodden territory of Sri Lankan settlement archaeology

is invaluable. For us it was definitely worth the effort. Some of us might say that those were the hitherto best years of our lives.

#### THE FUTURE

The SARCP established a great number of enduring personal relationships between Sri Lankan and Swedish archaeologists. Several young Sri Lankan archaeologists have visited Sweden starting in 1992. Links to the universities in Sweden have been formed and short- or medium-term educational programs have been set up for individual Sri Lankans in Lund, Stockholm and Uppsala, and Ph.D. programs are in planning. Students from Stockholm and Uppsala have visited Sri Lanka within SIDA's MFS (Minor Field Studies) program.

In 1997 two young Sri Lankans, Gamini Adikari and Sujeewa Jasinghe, spent a month in Lund attending a special course in historical osteology, and during that visit a permanent collaboration agreement between the Institute of Archaeology at Lund University and the PGIAR was signed, aiming at future exchange on the graduate-student level and lecturers' level, but also at joint research programs. The content of this was further discussed during a visit to Sri Lanka by the present author in March 1998, and during a visit by Senake Bandaranayake to Lund in August 1998.

Sri Lankan archaeology has long since come of age, so there is a very limited need for the "aid-programs" of the past. Furthermore, there is certainly no room in today's world for "expeditionary" archaeology, where European or North American archaeologists set off to "discover" this and that in foreign countries. The Lund/PGIAR program, therefore, is founded on the principle of total reciprocity; exchange will go both ways and no research issues will be included which are not possible to study in both countries by Sri Lankan and Swedish colleagues in collaboration. We all hope that this will initiate some new developments in archaeology in

both countries. We can learn immensely from each other. Research problems of one part of the globe need not be alien to another part. It's a small world after all.

*English revised by Laura Wrang.*

## ACKNOWLEDGEMENTS

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