A Report on the Archaeology of the Lunugamvehera National Park, Sri Lanka

H. M. Chryshane Mendis

Independent researcher in archaeology http://www.mendis@gmail.com

Abstract

This report is a survey of the archaeological sites found within the Lunugamvehera National Park in southern Sri Lanka. The Lunugamvehera National Park (now Yala Block VI) is a designated protected area under the Fauna and Flora Protection Ordinance of Sri Lanka and listed as a National Park in 1995 to protect the catchment area of the Lunugamvehera Reservoir, which was completed in 1985. The topography of Lunugamvehera includes gently rolling terrain with several large rock outcrops, and small rainfed streams and tanks. Scattered on the rock outcrops are several archaeological monuments of ancient Buddhist monasteries indicating early settlements. Human settlements in the area continued until the 1980s when the population was resettled due to the construction of the reservoir. This survey is based on multiple field visits and contains verified sites as well as potential sites ranging from early historical monastic sites to abandoned 20th century settlements. Ten verified archaeological sites, three potential archaeological sites and thirty five unverified archaeological sites and features are documented. The archaeology of the Lunugamvehera National Park area has not been studied systematically and this report encourages further scientific investigation on the archaeology of the park.



Ancient Lanka: Volume 3 (2024) © 2024 by the author/s. <u>https://doi.org/10.29173/anlk805</u> This is an open access article distributed under the terms and conditions of the Creative Commons Attribution <u>CC BY 4.0</u>

Introduction

The Lunugamvehera National Park (now renamed Yala Block VI) is a designated protected area under the Fauna and Flora Protection Ordinance of Sri Lanka and administered by the Department of Wildlife Conservation (DWC). It is a park of approximately 23,500 hectares and straddles the Monaragala District of the Uva Province and the Hambantota District of the Southern Province. The Kirindi Ova (river) forms the park's western boundary, and flows into the Lunugamvehera Reservoir, which is located within the park boundaries. The Lunugamvehera Reservoir forms the park's southern boundary. The park also borders the Manik Ganga (river) to its northeast including part of the Veheragala Reservoir. The main urbanised or built-up regions are found to the south and west of the Park along the A2 main road (Hambantota-Wellawaya road). The park was listed as a National Park in 1995 to protect the catchment area of the Lunugamvehera Reservoir, which was completed in 1985 (Department of Wildlife Conservation, 1998). Falling under the overall dry zone in southern Sri Lanka, the park is located approximately 20 km from the coast and contains characteristic dry zone fauna such as the Asian Elephant (Elephas maximus maximus) and the Sri Lankan Leopard (Panthera pardus kotiya). The topography of Lunugamvehera is a southwards sloping, gently rolling terrain containing several large rock outcrops with the twin peaks of Sittarama Kanda being the only exception of a hill (Figure 3). It contains many small rainfed streams and tanks. Scattered on the rock outcrops are several archaeological monuments of ancient Buddhist monasteries indicating early settlements. Human settlements in the area continued until the 1980s when the population was resettled due to the construction of the reservoir.

The landscape of Lunugamvehera is demarcated as a natural landscape at present, reserved for wildlife (Figure 1), despite the presence of numerous archaeological ruins, which remain unexplored scientifically. This report presents a documentation of the various archaeological and potential archaeological sites and features within the Lunugamvehera National Park. This survey was undertaken between October 2021 and January 2023 by the author while engaged in a habitat restoration project within the park. The survey was conducted during field visits within the park based on archaeological sites indicated in the 1:50k topographic map of the Survey Department and in consultation with the villagers based on their knowledge. The sites were classified as a) Verified archaeological sites - based on visits where GPS points and photographs were taken; b) Verified archaeological sites of recent origin; c) Possible archaeological sites, which were visited, but where archaeological features were difficult to be determined; Finally d) Unverified archaeological sites - sites where field visits were not conducted, but insights were based on the topographic map and village folklore. A significant inclusion in the surveyed sites were those of recent origin, i.e., of the 20th century. These are remnants of the recent settlements that were abandoned in the 1980s, nevertheless making them part of the archaeological remains of human presence within the landscape. This report encourages further scientific investigation into the archaeology of the park.

Archaeological Sites within the Park

A total of 48 sites and features were identified based on the above classification. Of these, seven were verified archaeological sites of more ancient origin, three were verified archaeological sites of recent origin, three were possible archaeological sites, and 35 were unverified archaeological sites. These 48 sites can be broadly categorized as sites with built structures, artefact scatters and sites of historical irrigation and agricultural features (Figure 2).

One of the largest categories of sites were monastic sites, which amount to ten. Three sites in particular were visited, namely the rock outcrops of Vehera-hatha-gala, Bolhindagala and Panahegala. Scattered on these rock outcrops, which stand well above the treeline, are the ruins of brick built stupas. At Vehera-hatha-gala, which means rock with seven veheras (stupas), the ruins of about five stupas can be seen. One has been conserved by the Department of Archaeology. In the other two sites, only a single stupa mound was observed, but Panahegala contains the distinguishable ruins of another rectangular structure. Around these mounds of stupas stone-cut pedestals can be found for supporting wooden pillars and stone slabs which might have formed a flight of steps to the stupa. These are characteristic of the ruined monasteries found on rock outcrops throughout the dry zone. While only three rock outcrops were visited, the topographic map indicated several more rock outcrops with archaeological remains.

A significant observation and discovery was that of a stone pillar with an inscription. Found in the forest, bordering the northern edge of the Lunugamvehera reservoir, it measured roughly 2.8m in height. On one face of the pillar was an inscription in 12 lines, which, based on the script, could date between the 8th to 10th centuries. The existence of this pillar was known to villagers, but has not been documented before. Near the pillar site, a scatter of pottery was also found, which possibly dates to the Early or Middle Historic Periods. Of the three sites with potential archaeology, all three were small rock outcrops with one possibly containing a megalithic burial. There were three verified archaeological sites of recent origin. These were a heap of roof tiles belonging to a house of the old Pauwewa village; the remains of the old suspension bridge over the Kirindi Oya; and an iron slag deposit near the bund of a tank (this could be older). As stated previously, there were two villages within the park and much of that landscape was used for chena and paddy cultivation centred around the numerous small tanks. The 35 unverified archaeological sites were those where field visits were not made, yet the sites were known to exist based on the topographic map and from accounts of villagers. Among these, a few sites are said to contain stone pillars or have some cultural significance.

The most significant number of these unverified sites were 20 remains of abandoned tank bunds within the area submerged by the Lunugamvehera Reservoir. During the dry season, the reservoir's capacity drops to almost half, thereby exposing its upper limits. Through satellite imagery it was possible to identify 20 bunds of abandoned tanks in close proximity to the natural course of the Kirindi Oya. These bunds are clearly visible from the ground as well. The antiquity of

the bunds is not known. However, based on the positioning of some bunds, it is possible that some have a layered past, with bunds made at different time periods for more or less the same tank. Using satellite imagery, it was possible to identify the outlines of abandoned paddy fields below the bunds of four tanks. These features may not usually be classified as archaeological sites, but in essence, these are the traces of human occupation in the landscape, which is now devoid of settlements.

Archaeological Sites Close to the Park

Several archaeological sites exist immediately outside of the park boundary. Three monastic sites are found to the west of the park, on the right bank of the Kirindi Oya. 1) Kithulkote Asapuwa stupa is a small ruined monastic complex which was recently restored; 2) Veheragala Rajamaha Vihara or Gothapabbatha, is a monastic complex on a rock outcrop with inscriptions and is located along the Udawalawe road; and 3) Dewuramvehera, is a large monastic complex, which had been restored sometime ago. It comprises the ruins of several monastic buildings including a stupa and an image house. Two ruins were found to the east, on the bank of the Menik Ganga which is collectively known as Veheragala, and located near the dam of the Veheragala Reservoir. These are known and conserved archaeological sites and are likely of similar antiquity to those found within the park.

The major historical site in the wider landscape is Kataragama, which is a few kilometers from the eastern boundary of the park. Kataragama is a plural religious site of historical significance for Buddhists, Hindus and Muslims. The oldest archaeological remains are from a large stupa, the Kiri Vehera dating from around the 3rd century BCE. Uniquely, despite the 'collapse' of the ancient Ruhuna principality as a historical entity, this site has continued in prominence throughout the centuries as a major site of pilgrimage. The other significant historical site is the ancient city of Mahagama (Tissamaharama). Identified as one of the four major early urban centers in the island, this city was designed on a rectangular layout with walls and moats and contained a dense urban population within, as was evident from the extensive archaeological excavations conducted there from 1992 (de Silva, 2010; Weisshaar, 2015). Further, on the immediate outskirts of the city are monasteries with the large stupas of the Sandagiri Seya, Tissamaharama Stupa and Yatala Stupa. The main historical port that served Mahagama was located 10km south at Kirinda, where the Kirindi Oya flowed into the Indian Ocean.

Discussion

Human Occupation of the Wider Landscape

This landscape, situated between the Kirindi Oya and the Menik Ganga, approximately 20 km from the southern coast, has a deep history of human occupation from prehistoric times. Historically, the region fell into the ancient principality and, at times, into the semi-autonomous kingdom of Ruhuna in the southern portion of the island. The main city of Ruhuna was Mahagama, located in

modern day Tissamaharama, approximately 12 km from the southern border of the Lunugamvehera park. Somadeva (2006) has explored the urban origins of southern Sri Lanka through his investigations into the Lower Kirindi Oya Basin which he delineates as southwards from the dam of the Lunugamvehera Reservoir. He proposes a series of settlement and cultural phases for the development of the Lower Kirindi Oya Basin which, by extension, can also apply to the present area of study, as the floodplain of the Kirindi Oya begins within the present park.

According to Somadeva (2006), the gradual process of urbanization and settlement development in southern Sri Lanka originates from an Early Agro-Pastoral Village Phase between 900-500 BCE (also characterized as the Protohistoric Early Iron Age) to an Urban Transitive Phase between 500-350 BCE. Here, settlements are small and situated in the outer floodplain around small rainfed tanks. The primary forest would have been cleared for cultivation and eventually isolated villages would have been integrated with the development of the cascade system of small village tanks. Between 350-250 BCE an Early Urban Phase can be observed where settlements moved towards the Kirindi Oya floodplain, which is characterized by the construction of dams across the main river. This cultural phase also sees the development of the main urban center of Mahagama where the basal urban layers are dated to 400-300 BCE (Weisshaar, 2015). The introduction of Buddhism is another major development during this period, which is characterized by the Early Brahmi inscriptions and cave monasteries. From 250 BCE to 1000 CE can be identified as the Mature Urban Phase where settlements had fully occupied the Kirindi Oya floodplain (Somadeva, 2006). The initial period of this phase sees the development of foreign trade, the establishment of large scale Buddhist monasteries, and the construction of large urban tanks for irrigation. The urbanization process of this period is identified as an agrarian based low-density urbanization, where urban characteristics are affected and assimilated as a network of scattered communities and settlements towards the hinterland from the city center (Coningham & Gunawardhana, 2013). From the 11th century CE onwards, there is a decline in the settlements of the Ruhuna principality, where a population shift to the wet zone of the island is seen, with the shifting of royal capitals. Nevertheless, isolated rural settlements would have existed throughout the centuries until modern times.

Synthesis of the Historical Landscape of Lunugamvehera

The historical landscape of Lunugamvehera needs to be investigated in the light of the above discussion on the processes of urbanization centred along the Kirindi Oya. Based on the present evidence, the known archaeological sites with brick architecture, which are primarily Buddhist monastic sites, most definitely date after the 3rd century BCE. Given its proximity to the Lower Kirindi Oya Basin, it is possible that the upper regions of the park that contain a rolling terrain, would have initially been settled by small agro-pastoral communities during the Early Iron Age. They would have taken advantage of the natural rainfed streams and pools to develop chena (shifting) cultivation, carried out in this region until recently, and even developed tanks along the small tributaries of the Kirindi Oya and Menik Ganga.

Based on the recent discovery of a cluster of megalithic burials in Kithulkote (Marian, 2022) which is just outside the park, it is probable that there could be megalithic burials within the park as identified from one site (site LNP013). Such burials are generally characteristic of the Early Iron Age (ca.900 to 600 BCE), but can fall within the Early Historical Period as well (Deraniyagala, 1992; de Silva, 2010).

Examining the monastic ruins are key to understanding the early settlement history of the landscape as all monasteries are associated with human settlements (Somadeva, 2006). Gunawardhana (2023) argues that the urbanization process grew from the ancient citadel of Magama (also spelt Mahagama) in the Kirindi Oya region, which allowed for the establishment of a network of monasteries in the hinterland. In ancient South Asia, Buddhist monasteries were located along communication routes to tap into trade. Studies from the hinterland of Anuradhapura have shown similar results, where monasteries functioned as centres of craft production and were directly linked to irrigation infrastructure (Davis, 2013; Gunawardhana, 2023). The existence of, approximately 10, monastic sites on rock outcrops within the park including numerous irrigation tanks of varied antiquity, and their overall proximity to the Kirindi Oya and Magama ancient urban center adds credence to the above.

Concerning the antiquity of the monastic ruins found within the park, these can be identified as focal monasteries based on Gunawardhana's classification (Davis, 2013; Gunawardhana, 2023). Ancient Buddhist monasteries, based on architectural layouts have been classified by Senaka Bandaranayke as Organic or Centric monasteries (Mahavihara type), the Pabbatta vihara type and the Padhanaghara type (Davis, 2013) with Gunawardhana adding a fourth, the Focal monastery. Focal monasteries consist of a prominent stupa of generally medium to small size on the top of a rock outcrop or hill with associated monastic buildings in the vicinity. These monasteries are relatively dated between 400-700 CE. Nevertheless, Davis (2013) argues that this type could actually represent the hinterland version of the urban-organic monastery type, and based on further studies of sites in the hinterland of Anuradhapura, he dates these from ca. 700-900 CE. Further research is undoubtedly necessary to describe and date the monasteries within the Lunugamvehera National Park. Nevertheless, it is interesting to note that the pillar inscription found also dates to the later period. Given that similar pillar inscriptions are usually associated with monastic establishments, it is possible that the Lunugamvehera pillar inscription is of similar antiquity and associated with a nearby monastery.

Recent Human Settlements and the Palimpsest of Lunugamvehera

While there appears to be a gradual decline in the population after the 12th century, some isolated rural settlements survived, possibly, due to the continuum of the Kataragama sacred area. Regarding accessibility, there is evidence from the 16th century *Sitavaka Hatana* poem to show that a road existed from Kataragama through Galge, north towards Buttala, almost tracing the left bank of the Menik Ganga. The present main road from Tissamaharama to Wellawaya, traces along the right bank of the Kirindi Oya, and could also be relatively ancient. A famous

restaurant (*Gämi Gedara*) located along this road, approximately a kilometer before the park entrance, was established over 100 years ago, and was a popular stop then as it is now. By the 20th century, there were notably two established villages: Pauwewa and Sittarama, located within the park area, but inhabitants were relocated due to the construction of the reservoir. The traces of these settlements are now part of the archaeology of the landscape. It is evident that the cultivation associated with these more recent settlements transformed the natural habitat cover and irrigation topography of the park. Approximately 29 rain-fed tanks are present, which were once used for cultivation. The abandoned paddy fields can still be seen below the bunds of some of these tanks.

The natural habitat cover of Lunugamvehera can be divided into four main categories; Dense forests, Scrub forests, Grasslands and Plantation forests (Department of Wildlife Conservation, 1998). The Dense forests, which the villagers identify as the original forests, are in fact dry zone forests of secondary origin. In the last 800 years, after this area was abandoned during the historical period, it has evolved to its present stage (Department of Wildlife Conservation, 1998). However, due to extensive chena cultivation in the mid-20th century and the growth of forest plantations, this dense forest type has been reduced to 15% of the area of the park. With the abandoning of settlements and cultivation altogether, by the 1980s, a substantial Scrub forest of various successional stages now covers 53% of the park. Satellite imagery clearly shows the intersections of the different forest types, highlighting their anthropogenic origin (Figures 4 and 5). The deep exploration of the natural landscape shows that human agency still prevails as can be traced through the palimpsest of horizontal layers (Figure 6). This human-environmental interaction can be seen from the early historic layers of focal monasteries to the ancient irrigation tanks, which were created around the natural streams. The practice of chena cultivation in historical and modern times have drastically altered forest cover, creating the various successional stages of different forest covers we see today (Mendis, 2024).



Figure 1. View of the Lunugamvehera landscape from Bolhindagala rock outcrop (Photo by C. Mendis, 2023).

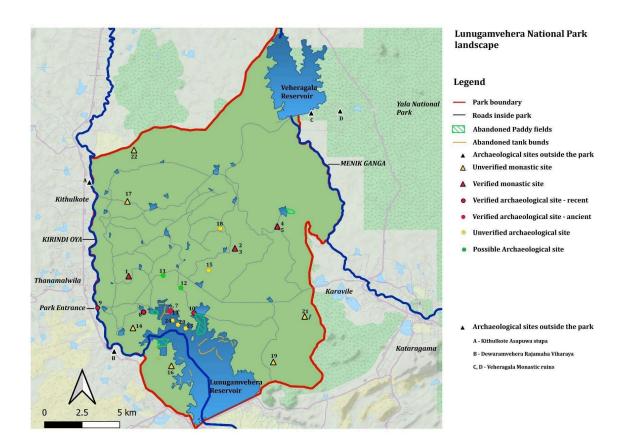


Figure 2. Map of Lunugamvehera National Park with Archaeological sites. The numbers in the map correspond to the ID number of each site in Table 1 (Map by C. Mendis, 2024).

ID	NAME	TYPE	COORDINATES	PERIOD	DESCRIPTION
LNP001	Vehera-hatha-gala - restored Stupa	Verified Archaeological site	6°26'25.24"N / 81° 9'28.12"E	Early-Mid Historic	Rock outcrop with monastic ruins
LNP002	Bolhindagala - stupa	Verified Archaeological site	6°27'25.13"N / 81°13'17.81"E	Early-Mid Historic	Rock outcrop with ruined stupa
LNP003	Bolhindagala - unknown structure	Verified Archaeological site	6°27'23.36"N / 81°13'17.62"E	Early-Mid Historic	Rock outcrop with monastic ruins
LNP004	Panahegala - stupa	Verified Archaeological site	6°28'12.51"N / 81°14'49.58"E	Early-Mid Historic	Rock outcrop with ruined stupa
LNP005	Panahegala - unknown structure	Verified Archaeological site	6°28'13.99"N / 81°14'49.65"E	Early-Mid Historic	Rock outcrop with monastic ruins
LNP006	Stone Pillar Inscription	Verified Archaeological site	6°25'7.71"N / 81°10'55.45"E	Mid Historic - 8-10 centuries AD	Stone pillar with inscription
LNP007	Pottery fragments	Verified Archaeological site	6°25'10.93"N / 81°10'59.02"E	1-3 centuries AD	Pottery fragments near pillar inscription
LNP008	Roof tiles of old Pawuwewa Village	Verified Archaeological sites – Recent	6°25'7.37"N / 81°10'0.51"E	20th century	Ruins of abandoned Pawuwewa village
LNP009	Abandoned Suspension bridge	Verified Archaeological sites – Recent	6°25'16.93"N / 81° 8'20.07"E	19th - 20th century	Suspension bridge over the Kirindi Oya
LNP010	Rathmalwewa Iron slag deposit	Verified Archaeological sites – Recent	6°25'5.45"N / 81°11'49.22"E	Unknown	Iron slag deposit near bund of Rathmalwewa
LNP011	Pattigala	Possible Archaeological site	6°26'26.46"N / 81°10'42.73"E	Unknown	Rock outcrop with possible archaeological remains. Said to contain a rock with a symbol which has been destroyed now.

LNP012	Rock with possible Archaeological significance	Possible Archaeological site	6°25'59.90"N / 81°11'20.92"E	Unknown	
LNP013	Rock with possible Megalithic tomb(s)	Possible Archaeological site	6°25'11.35"N / 81°10'59.34"E	Unknown	Possible site with Megalithic tomb
LNP014	Unknown Site 1 – Chaitya Gala	Unverified Archaeological site	6°24'33.30"N / 81° 9'37.24"E	Historical	Rock outcrop with monastic ruins
LNP015	Unknown Site 2	Unverified Archaeological site	6°26'37.74"N / 81°12'21.05"E	Historical	Site with Stone Pillars. Location tentative.
LNP016	Unknown Site 3	Unverified Archaeological site	6°23'11.45"N / 81°11'0.30"E	Historical	Rock outcrop with monastic ruins
LNP017	Unknown Site 4	Unverified Archaeological site	6°29'6.71"N / 81° 9'25.66"E	Historical	Monastic ruins
LNP018	Unknown Site 5	Unverified Archaeological site	6°28'7.49"N / 81°12'46.37"E	Historical	Ancient cave
LNP019	Unknown Site 6	Unverified Archaeological site	6°23'19.47"N / 81°14'40.57"E	Historical	Sittarama Kanda with Monastic ruins
LNP020	Unknown Site 7	Unverified Archaeological site	6°24'40.17"N / 81°11'14.71"E	Historical	Site with Stone Pillars. Location tentative.
LNP021	Unknown Site 8 – Paskema	Unverified Archaeological site	6°24'57.77"N / 81°15'48.49"E	Historical	Rock outcrop with monastic ruins
LNP022	Unknown Site 9 – Dachchabadde Gala	Unverified Archaeological site	6°30'57.47"N / 81° 9'39.84"E	Historical	Rock outcrop with monastic ruins
LNP023	Unknown Site 10 - Menik Godalla	Unverified Archaeological site	6°24'32.34"N / 81°11'31.35"E	Historical	Site with ruins. Location tentative
LNP024	Unknown Site 11 - Kirila Wala	Unverified Archaeological site	6°24'49.30"N / 81°11'3.18"E	Historical	Cultural site with historical significance
LNP025	Bund 1	Unverified Archaeological site	6°25'26.18"N / 81°10'37.53"E	Unknown	Tank bund with East-West orientation/Appx 400m

LNP026	Bund 2	Unverified Archaeological site	6°25'5.35"N / 81°10'44.10"E	Unknown	Tank bund with North-South orientation/Appx.930m
LNP027	Bund 3	Unverified Archaeological site	6°25'5.15"N / 81°10'48.97"E	Unknown	Tank bund with East-West orientation/Appx 300m
LNP028	Bund 4	Unverified Archaeological site	6°23'52.81"N / 81°10'38.93"E	Unknown	Tank bund with East-West orientation/Appx 620m
LNP029	Bund 5	Unverified Archaeological site	6°23'26.31"N / 81°10'32.38"E	Unknown	Tank bund with Northwest-Southeast orientation/Appx.200m
LNP030	Bund 6	Unverified Archaeological site	6°22'39.69"N / 81°11'19.86"E	Unknown	Tank bund with North-South orientation/Appx.380m
LNP031	Bund 7	Unverified Archaeological site	6°22'30.84"N / 81°11'9.00"E	Unknown	Tank bund with North-South orientation/Appx.160m
LNP032	Bund 8	Unverified Archaeological site	6°22'38.00"N / 81°11'38.64"E	Unknown	Tank bund with East-West orientation/Appx 200m
LNP033	Bund 9	Unverified Archaeological site	6°22'55.72"N / 81°11'42.65"E	Unknown	Tank bund with North-South orientation/Appx.400m
LNP034	Bund 10	Unverified Archaeological site	6°24'2.88"N / 81°12'7.47"E	Unknown	Tank bund with Southwest-Northeast orientation/Appx.750m
LNP035	Bund 11	Unverified Archaeological site	6°23'40.96"N / 81°12'17.41"E	Unknown	Tank bund with Southwest-Northeast orientation/Appx.1300m
LNP036	Bund 12	Unverified Archaeological site	6°24'13.94"N / 81°12'48.86"E	Unknown	Tank bund with Northwest-Southeast orientation/Appx.380m
LNP037	Bund 13	Unverified Archaeological site	6°24'5.73"N / 81°12'51.81"E	Unknown	Tank bund with East-West orientation/Appx 550m

LNP038	Bund 14	Unverified Archaeological site	6°23'33.73"N / 81°12'41.07"E	Unknown	Tank bund with North-South orientation/Appx.780m
LNP039	Bund 15	Unverified Archaeological site	6°23'58.55"N / 81°13'12.00"E	Unknown	Tank bund with North-South orientation/Appx.330m
LNP040	Bund 16	Unverified Archaeological site	6°23'27.57"N / 81°11'20.56"E	Unknown	Tank bund with Northwest-Southeast orientation/Appx.320m
LNP041	Bund 17	Unverified Archaeological site	6°24'30.21"N / 81°11'31.92"E	Unknown	Tank bund with East-West orientation/Appx 600m
LNP042	Bund 18	Unverified Archaeological site	6°24'0.96"N / 81°13'18.24"E	Unknown	Tank bund with North-South orientation/Appx.200m
LNP043	Bund 19	Unverified Archaeological site	6°22'32.05"N / 81°11'21.16"E	Unknown	Tank bund with Northwest-Southeast orientation/Appx.170m
LNP044	Bund 20	Unverified Archaeological site	6°25'9.28"N / 81°11'14.80"E	Unknown	Tank bund with Northwest-Southeast orientation/Appx.115m - name Nondi Wewa
LNP045	Abandoned Paddy field 1	Unverified Archaeological site	6°24'52.18"N / 81°12'1.51"E	Unknown	Below Rathmal Wewa
LNP046	Abandoned Paddy field 2	Unverified Archaeological site	6°25'8.51"N / 81°10'25.06"E	Unknown	Below Pahala Pauwewa
LNP047	Abandoned Paddy field 3	Unverified Archaeological site	6°23'55.98"N / 81°10'34.33"E	Unknown	Below Unknown Wewa
LNP048	Abandoned Paddy field 4	Unverified Archaeological site	6°28'46.95"N / 81°15'14.89"E	Unknown	Below Welumba Wewa

Table 1. List of archaeological sites noted during survey.



Figure 3. View of the Lunugamvehera reservoir with the Sittarama twin peaks in the background (Photo by C. Mendis, 2023).



Figure 4. Vegetation mosaic characterized by dense forests in dark green and scrub patches in light green (Google Earth imagery, 2024).



Figure 5. Blocks of former Teak plantations cut into the dense forest (Google Earth imagery, 2024).



Figure 6. Elephant on top of the ditch made for the Elephant Holding Ground within the park (Photo by C. Mendis, 2022).

Description of the Archaeological Sites

Verified Archaeological Sites

Vehera-hatha-gala (LNP001) - 6°26'25.24"N / 81° 9'28.12"E

This is one of several large rock outcrops found throughout Lunugamvehera National Park (Figure 7). It is approximately 2 km from the left bank of the Kirindi Oya River and contains the ruins of several stupas. The name denotes rock with seven stupas, and at present five stupa mounds were identified. One stupa in the northern extreme of the site has been conserved (Figure 8) in recent decades and according to the locals, there was a resident monk in the 1990s. However, this site has since been neglected. Burnt bricks are found throughout the site including other archaeological features such as stone pedestals. This site can be accessed via the Veherahathagala road and is about 3 km from the park entrance.



Figure 7. View of Vehera-hatha-gala rock outcrop (Google Earth imagery, 2024).





Figure 8. Ruins of Vehera-hatha-gala (Photos by C. Mendis, 2023)

Bolhindagala (LNP002 & LNP003)

Bolhindagala is another prominent rock outcrop (Figure 9) situated deep within the park and accessed through the Boldhindagala road. It is approximately 9 km from the left bank of the Kirindi Oya. Here, the ruins of one stupa (6°27'25.13"N / 81°13'17.81"E) had been dug out by treasure hunting looters. A little south of this site the base of an unknown structure (6°27'23.36"N / 81°13'17.62"E) made of stone was also observed (Figure 10). The ruins of this stupa was unique, as it was built of burnt brick and flat stone, not seen in the other ruined stupas within the park. There are also several rock *kemas* in the vicinity.



Figure 9. View of Bolhindagala rock outcrop (Google Earth imagery, 2024).



Figure 10. Ruins of Bolhindagala stupa mound and second structure (Photos by C. Mendis, 2021).

Panahegala (LNP004 & LNP005)

Panahegala is another prominent rock outcrop (Figure 11) with the ruins of a brick stupa and other structures. It is located towards the eastern end of the park and is 3.5 km to the right bank of the Menik Ganga. The ruined stupa (6°28'12.51"N / 81°14'49.58"E) has been subjected to recent treasure hunting and looting activity. There is evidence of dynamite use (Figures 12 and 13). The wildlife officers noted that the Department of Archaeology officials had visited the site in relation to the destruction, and a court case is on-going. Near the ruins of the stupa are the remains of a square building with upright stone pillars (6°28'13.99"N / 81°14'49.65"E). This site is also known as Waraluwapudama in survey department maps.



Figure 11. View of Panahegala rock outcrop (Google Earth imagery, 2024).



Figure 12. Ruins of unknown structure on Panahegala (Photos by C. Mendis, 2021).



Figure 13. Ruins of stupa mound recently dug by treasure hunter looters (Photo by C. Mendis, 2021).

Stone Pillar Inscription (LNP006) - 6°25'7.71"N / 81°10'55.45"E

The existence of this stone pillar with an inscription is known among villagers. It is located 1.2 km north of the left bank of the Kirindi Oya, now on the edge of the forest with the reservoir (Figure 14). The pillar was known to be upright and supposedly *in-situ*. However, when we visited the site on the 8th of September, 2022 we found that it had been dug out by treasure hunters and placed horizontally on the ground nearby. It appeared that this illegal digging had been carried out quite recently, possibly a few months prior. Thankfully the pillar appears not to have been damaged (Figures 15 through 20).

The pillar measured 280 cm in height, 26 cm in width and 18 cm in breadth (Figure 17). The inscription has 12 lines with the figure of a horse (Figure 18) at the end of the inscription and the figure of a key on the side. It was not possible to read the inscription, but a cursory examination of the script indicated it to be between the 8th to 10th centuries. It is an early form of the Sinhala script. It is possible that this is a *Sima Kanuwa* or a *Gawu Kanuwa*. No monastic site is known to exist at the exact location, but there are two sites close by that are said to contain ruins. Those sites were not identifiable during this study (see below).



Figure 14. Location of pillar inscription on forest edge with the reservoir. There is a jeep track along the border of the reservoir: when the waters recede the site is easily accessible. (Google Earth imagery, 2024).



Figure 15. Full length of the pillar with the inscription as it was found (Photo by C. Mendis, 2022).

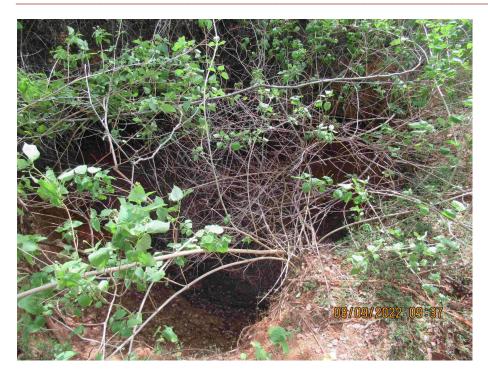
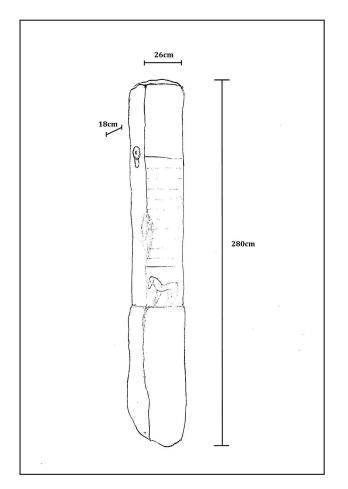


Figure 16. Pit dug out, where the pillar with the inscription would have originally been placed (Photo by C. Mendis, 2022).



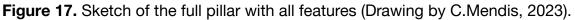




Figure 18. Closeup of the figure (Photo by C. Mendis, 2022).



Figure 19. Figure of the Key on the side of the pillar. (Photo by C. Mendis, 2022).



Figure 20. A focus on the inscription. The dividing lines are clearly visible, but the inscription appears to have considerably weathered. Some characters were not visible. (Photo by C. Mendis, 2022).

Pottery fragment (LNP007) - 6°25'10.93"N / 81°10'59.02"E

There is a small rock outcrop just a few dozen meters away from the pillar inscription site in the forest's edge. The site has been recently dug out by treasure hunters for about a meter in depth (Figures 23 through 26). I observed a potsherd embedded in the earth, in the profile wall, at 2 feet from the surface level. Although this might be an *in-situ* deposit, the area is bordering the reservoir and it is more plausible that this is a sediment deposit from the reservoir and that this potsherd may not originate from the site. After careful extraction and cleaning I tentatively identified it as Fabric D - Mica Slipped Ware based on the Tissamaharama pottery sequence (Figure 21). Its form was indicative of Form D, which are small jars for transport and storage of water. Mica slipped Wares are a type of ware with a red slip, and a high portion of mica, making the exterior surface appear golden. The potsherd's golden shining surface and the characteristic paddle marks helped to tentatively identify it. Based on the Tissamaharama pottery sequence, these types of ware can be dated between the 1st and 3rd centuries CE. Few other pottery fragments, including a portion of a rim, were also found on the surface (Figures 22 and 27) near this small rock outcrop. However, it was not possible to tentatively identify them, nor date them. They appear to be Coarse Red Ware.



Figure 21. Large Pottery fragment with scale in cm (Photo by C. Mendis, 2022).



Figure 22. Other pottery fragments to scale. (Photo by C. Mendis, 2022).



Figure 23. Location of the small rock outcrop. (Photo by C. Mendis, 2022).



Figure 24. Large pottery fragment at location. (Photo by C. Mendis, 2022).



Figure 25. Large pottery fragment embedded in the earth. Circled in red. (Photo by C. Mendis, 2022).



Figure 26. Large pottery fragment embedded in the earth and stone with drill marks from treasure hunters. (Photo by C. Mendis, 2022).



Figure 27. Other pottery fragments on the surface. (Photo by C. Mendis, 2022).

Verified Archaeological Sites – Recent

Roof tiles of old Pawuwewa Village (LNP008) - 6°25'7.37"N / 81°10'0.51"E

Within the area presently defined as the National Park, there were two villages in the 20th century, Pauwewa/Pawuwewa and Sittarama. According to the locals, these were at least 200 years old. The Pauwewa village was located around the Ihala Pauwewa and Pahala Pauwewa tanks (Figure 28). Speaking to one villager, he said that he was born there, but that his family moved out in the 1970s when the area was earmarked for the Lunugamvehera Reservoir. There were twelve families in this village which accounted for 800 acres. These lands officially belonged to the Kataragama Devale, but were lent to the villagers. The houses were made of mud with roof tiles. All structures have since disappeared but heaps of roof tiles can still be found under trees (Figure 29). These roof tiles are the only archaeological remains of this village at present.

There was also a temple there, but no remains of it were found. He pointed to a large Siyambala tree (Figure 30), which was called '*Hathakma Siyambalawa*'. The main occupation of this village was *mada govitana* (paddy cultivation) and *goda govitana* (chena cultivation). The outlines of the paddy fields can still be seen below the bund of the Pahala Pauwewa tank which is visible through satellite imagery when the reservoir recedes. The second village was Sittarama, which he stated was now completely submerged by the reservoir. It still survives in the name of the Grama Niladhari Division which covers the present area below the dam.



Figure 28. Location of the roof tiles of the abandoned village between the two tanks (Google Earth imagery, 2024).



Figure 29. Remains of roof tiles. (Photo by C. Mendis, 2022).



Figure 30. The Siyambala tree. (Photo by C. Mendis, 2022).

Old Suspension bridge over the Kirindi Oya (LNP009)

The Kalu Palama is the bridge over the Kirindi Oya from where one enters the National Park from Thanamalwila (Figures 31 and 32). It was built in the 1930s and before that was a wooden suspension bridge. Amazingly, its wooden frames attaching to two Kumbuk trees on either side could still be seen right next to the present bridge; the bark of the trees having encapsulated the frame making it almost part of the tree now (Figures 33, 34 and 35). This is an interesting archaeological feature which can usually be missed as insignificant.



Figure 31. The location of the Kalu Palama or present iron bridge over the Kirindi Oya (Google Earth imagery, 2024).



Figure 32. The Kalu Palama, the present bridge over the Kirindi Oya near the Park entrance. (Photo by C. Mendis, 2022).

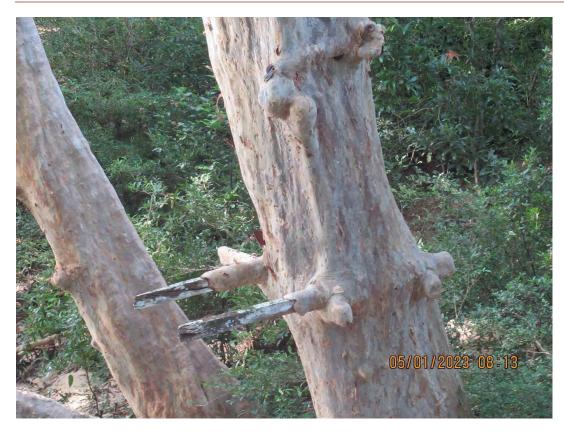


Figure 33. The remains of the old suspension bridge embedded in the tree. (Photo by C. Mendis, 2023).



Figure 34. The remains of the suspension bridge as seen from the Kalu Palama. (Photo by C. Mendis, 2023).



Figure 35. The remains of the suspension bridge. (Photo by C. Mendis, 2023). *Rathmalwewa Iron slag deposit (LNP010) - 6°25'5.45"N / 81°11'49.22"E*

This deposit of Iron Slag is found on the west end of the bund of the Rathmal Wewa and a few meters away from the DWC Bungalow (Figure 36). It can be found to the left of the concrete road leading up to the bund from the bungalow. There were no other artefacts observable in the vicinity to obtain a tentative date for this site (Figures 37 and 38). According to villagers, the Rathmal Wewa is not a very old tank. This tank was used for paddy cultivation until the 1980s when the area was evacuated for the reservoir. The traces of the former paddy fields are still visible below the bund when the reservoir recedes. They said that there were no settlements around the tank despite the cultivation. The nearest two villages were a few kilometres to the west and south of this tank. While this is surely an archaeological feature, its antiquity is hard to determine. It could also possibly be of more ancient antiquity, as iron slag deposits are known to occur near bunds of ancient tanks.



Figure 36. The Rathmal Wewa with iron slag deposit. The traces of old paddy fields can be seen here below the bund. (Google Earth imagery, 2024).



Figure 37. Iron slag deposit. (Photo by C. Mendis, 2022).



Figure 38. Close ups of the iron slag (Photos by C. Mendis, 2022).

Possible Archaeological Sites

Pattigala (LNP011) - 6°26'26.46"N / 81°10'42.73"E

This is a small rock outcrop along the main Karavile road within the park. The villagers identify this as a historical site called Pattigala and said it contained a rock with a symbol thought to hold treasure. When we visited it, that rock was split in half. There is also said to be a pond nearby (possibly a *kema*).

Rock with possible archaeological significance (LNP012) - 6°25'59.90"N / 81°11'20.92"E

The rock outcrop is of flake stones and therefore ideal for megalithic burials. Might be a source for stone at the very least. It is located on the road to Rathmalwewa.

Rock with possible Megalithic tombs (LNP013) - 6°25'11.35"N / 81°10'59.34"E

This site is located a few meters from the site of the rock outcrop with pottery (LNP007), along the edge of the reservoir. The area is heavily under scrub, but a peculiar rock formation was observed. Some of the rocks, as seen in other areas as well, contain a flaking texture, and therefore appear suitable for extraction as slabs

(Figures 39 and 40). It is possible that this feature is a megalithic tomb, as a megalithic tomb was reported from Thanamalwila (in 2020-2022), but it could also simply be a natural rock formation. This needs further investigation.



Figure 39. Site of stone flakes (LNP013) which could possibly be a megalithic site. (Photo by C. Mendis, 2022).



Figure 40. Site of stone flakes (LNP013) which could possibly be a megalithic site. (Photo by C. Mendis, 2022).

Unverified Archaeological Sites

*Field visits were not made to these sites. These were noted by speaking to villagers, as well as consulting survey maps, and Google Earth satellite imagery surveys.

Unknown Site 1 - Chaitya Gala (LNP014) - 6°24'33.30"N / 81° 9'37.24"E

This site is located 2 km from the left bank of the Kirindi Oya and just to the east of the Galwewa tank. A field visit was not made to this site, but it was noted by villagers, who call it Chaitya Gala, to contain the ruins of two stupas on a small rock which have been dug up. This site is noted on the topographic map.

Unknown Site 2 (LNP015) - 6°26'37.74"N / 81°12'21.05"E

This site information was shared by a villager who said it contained some stone pillars. It was tentatively located southwest of Bolhindagala but no field visit was made; therefore the location is not accurate.

Unknown Site 3 (LNP016) - 6°23'11.45"N / 81°11'0.30"E

This site is found on the right bank of the Kirindi Oya after its course turns eastwards and is now located on the border of the reservoir. The topographic map indicates it as a ruined monastic site located on a small rock outcrop. A field visit was not possible here. Satellite images show two rock outcrops here which most likely contain monastic ruins.

Unknown Site 4 (LNP017) - 6°29'6.71"N / 81° 9'25.66"E

The topographic map indicates a monastic site along the Thalgahadigana road (close to the Kithulkote entrance), but field visits were not made.

Unknown Site 5 (LNP018) - 6°28'7.49"N / 81°12'46.37"E

The topographic map indicates an ancient cave site 2 km northwest of the main Bolhindagala monastic site. No field visit was made.

Unknown Site 6 (LNP019) - 6°23'19.47"N / 81°14'40.57"E

The high mountain of Sittarama is located towards the southeast end of the park, bordering the Lunugamvehera reservoir. It was not possible to visit this site, but the 1:50,000 topographic map indicates Buddhist monastic ruins. It is possible that this site was much more extensive than the other rock outcrop monasteries. This is the highest peak within the park and forms a prominent landmark.

Unknown Site 7 (LNP020) - 6°24'40.17"N / 81°11'14.71"E

This site is supposed to be close to the left bank of the Kirindi Oya in the area usually submerged by the reservoir. The villagers say that stone pillars can still be seen, but it was not possible to locate this site.

Unknown Site 8 (LNP021) - Paskema - 6°24'57.77"N / 81°15'48.49"E

Rock outcrop known as Paskema. The LNP Management Plan from 1998 mentions that there are ruins here.

Unknown Site 9 (LNP022) - Dachchabadde Gala - 6°30'57.47"N / 81° 9'39.84"E

Dachchabadde gala rock outcrop with monastic ruins. Mentioned in the LNP Management Plan.

Unknown Site 10 - Menik Godalla (LNP023) - 6°24'32.34"N / 81°11'31.35"E

This is another site said to be close to Site 7, as informed by the villagers. The name means mound with gems and is said to yield precious stones. It was not possible to locate this site. Based on information from the villagers, it is somewhere in the area around the GPS point. However, another villager said that this site and Site 7, with stone pillars, are both closer to the Rathmal Wewa.

Unknown Site 11 - Kirila Wala (LNP024) - 6°24'49.30"N / 81°11'3.18"E

This is a cultural site, as told by the villagers, and located within the reservoir just south of the Nondi Wewa (Bund 20).

Old Tank bunds within the Lunugamvehera Reservoir (LNP025-LNP044)

Ideally what would be termed the hydrographic profile of the park can be best described as the Irrigation Topography due to the large number of abandoned and in-use irrigation tanks including two large reservoirs. The antiquity of this irrigation topography is hard to judge due to lack of in-depth studies. The present relies on surface mapping and distribution together with memories of villagers about recent use. The irrigation topography of Lunugamvehera is primarily centered on the natural tributary streams flowing into the Kirindi Oya and the Menik Ganga rivers. These are primarily the Urugal Ara and Sittaram Ara in the central part of the park which flow into the Kirindi Oya with the Hangune Ara in the north east of the park flowing into the Menik Ganga. These small streams are mainly rainfed and therefore run dry for most of the year. The survey department's 1:50,000 topographic map indicates approximately 90 tanks arranged in the traditional cascade system based around the above tributaries. The map illustrates two types of tanks: 1) tanks with clear outlines which are yet to be found, and 2) numerous tanks with simplified outlines. A survey of historical satellite imagery in Google Earth from the years 2010 to 2023 proved unsuccessful to trace these additional tanks. It is not known as to what source the topographic map used. Therefore, there are potentially older tanks that have now disappeared in the forest cover. This, however, proved a problem in understanding the utilization of the irrigation features as the historicity or antiquity of these tanks is not known. At present, there are 29 tanks that are maintained by park authorities and, including the reservoir, account for 15% of the surface area of the park. While the present use of the tanks is for wildlife, the names of some of these tanks spell out their former use in human agricultural settlements such as 'Miris-watta Wewa' translated as tank of the chili field.

Just as there are many old tanks on the tributaries of the Kirindi Oya in the center of the park, there are many more in close proximity to the river. Through satellite imagery it was possible to identify 20 bunds of abandoned tanks in close proximity to the natural course of the Kirindi Oya when the water levels recede (Figures 41, 42 and 43). These bunds are clearly visible from the ground as well. Their antiquity is unknown. However, based on the positioning of some bunds, it is possible that some have a layered past, with bunds made at different time periods for more or less the same tank.



Figure 41. Sites of the abandoned tank bunds (in white) within the reservoir together with other sites nearby. (Google Earth imagery, 2024).



Figure 42. Sites of the abandoned tank bunds. (Google Earth imagery, 2024).



Figure 43. Sites of the abandoned tank bunds. (Google Earth imagery, 2024).

Abandoned Paddy fields (LNP045-LNP048)

As stated before, this landscape was used for cultivation until the 1980s with several large tanks being used for paddy cultivation. I was able to identify, through satellite images, four locations of abandoned paddy fields where the *niyara* can still be seen during dry times, or when the reservoir waters recedes. The largest extent of fields is below the Rathmal Wewa (Figure 44), which extends for 1 km. The fields below the Pahala Pawuwewa (Figure 45) can also be seen when the waters recede. The third site is another large abandoned tank (Figure 46) bordering the reservoir with visible fields. The fourth site is in the center of the park below the Welumba wewa (LNP048/Figure 47); there is no reservoir here but older satellite images show the fields clearly. However, this area has been overtaken by the forest in recent years.



Figure 44. Sites of the abandoned paddy fields below the Ratmal wewa (LNP045) with a comparison when the reservoir is full. (Google Earth imagery, 2024).



Figure 45. Sites of the abandoned paddy fields below the Pahala Pawuwewa (LNP046) with a comparison when the reservoir is full. (Google Earth imagery, 2024).



Figure 46. Sites of the abandoned paddy fields below the unknown tank (LNP047) with a comparison when the reservoir is full. (Google Earth imagery, 2024).



Figure 47. Sites of the abandoned paddy fields below the Welumba wewa (LNP048). (Google Earth imagery, 2024).

References

- Coningham, R. A. E., & Gunawardhana, P. (2013). *Anuradhapura Volume III, Hinterland*, BAR International Series 2568, ArchaeoPress.
- Davis, C. E. (2013). *Early Buddhist Monasteries in Sri Lanka: a Landscape Approach*. PhD thesis, Durham University.
- Deraniyagala, S.U. (1992). *The Prehistory of Sri Lanka: An ecological perspective*. Colombo: Department of Archaeology.
- Department of Wildlife Conservation.(1998). Management Plan Lunugamvehera National Park, Volumes 01 & 02.
- De Silva, N. (2010). Magama the Ancient Capital of Ruhuna. In P. Gunawardhana, G. Adikari & R.A.E. Coningham (Eds.), *Sirinimal Lakdusinghe Felicitation Volume*. Neptune Publications, 2010.
- Gunawardhana, P. (2023). Low-Density Urbanism: Archaeology, Transformation and Collapse of Ancient Cities in Sri Lanka. Neptune Publications.
- Marian, T. (2022). Ancient Megaliths discovered from Thanamalvila. News First Sri Lanka. 18-02-2022. Available at: <u>Ancient Megaliths discovered from</u> <u>Thanamalvila</u>
- Mendis, H.M.C. (2024). A Landscape Biographical Approach to Lunugamvehera National Park. In *Dr. K. K. Muhammed Felicitation Volume*. In press.
- Somadeva, R. (2006). Urban Origins in Southern Sri Lanka. *Studies in Global Archaeology 3*. Uppsala, Department of Archaeology and Ancient History.
- Weisshaar, H-J., Roth, H., & Wijeyapala, W. (2001). Ancient Ruhuna. Sri Lankan –German Archaeological Project in the Southern Province, Volume 1. Philippvon Zabern
- Weisshaar, H-J. (2015). Ancient Tissamaharama: the formation of urban structures and growing commerce. In S. Tripati (Eds.), *Maritime Contacts of the Past, deciphering connections amoungst communities.* Delta Book World.