A Test Trench Through The Fortifications of Simraongarh

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Introduction

In this paper we present a short preliminary report on the main excavation trench carried out in 1992 by the IsMEO project at Simraongarh, labelled SMG-4. This trench was aimed at exploring the inner stratigraphy of the main rampart of the defences of Simraongarh. What nowadays remains of the defences of this ancient city is really impressive, doubtless. Sir M. Wheeler; with his colourful prose, could have labelled Simraongarh a 'monstrous artefact', as he did with one of the famous fortified settlements he excavated in Europe (Hawkes 1982: 163). Although we do not expect that the stratigraphy and history of the defences of Simraongarh could be reconstructed with only 1 or 2 trenches, the work carried out in 1992 allowed us to gather preliminary but valuable information.

Simraongarh

Simraongarh is a very large site located about 26°55' N Latitude, 85° 10' E Longitude (TPC H-9C), exactly at the border between India and Nepal. The site is approximately 25 km south-east of Birganj and belongs to the Bara district in the Mid Eastern Tarai region of Nepal at south, the main rampart of the city forms the border line with the Indian state of Bihar. Thanks to the interest and the support of the Dept. of Archaeology, H.M.G. of Nepal, since 1991 an archaeological team, under the direction of Prof. G.Verardi of IsMEO, started the exploration of this important site (Vidale and Lugli (1991-92).

It is well known that Simraongarh was the capital of an independent Hindu kingdom flourishing in the region called Mithila or Tirhut, until the short-lived political unification of great part of India and Bengal under the Tughluqs of Delhi. The history of Simraongarh is tied to a dynasty of kings from Karntaka which ruled this eegion from 1097 AD (the year in which the founder Nanyadeva declared himself a ruler, (*mahasamantadhipati*) to 1326, when the defences were stormed and the city was conquered by an Islamic army lead by Ghyasuddin Tughluq on his way back from a raid in Bengal defeating the then ruling King Harisimha deva. (see Thakur 1956: 227–289; Choudhary 1970; Karanth 1979: 51–67; Sinha 1979; Petech 1984). The list of the kings of Simraongarh is reported by Petech (1984) and Sinha (1979). The destruction of Simraongarh did not bring good luck to Ghyasuddin, who died soon after his return to Delhi in a strange accident together with his favourite son: in fact, both were buried under the collapse of a victory pavilion constructed by Ghyasuddin's other son and successor, the famous Muhammad Tughluq (Petech 1984: 113–114; Wolpert 1989: 115). Harasimhadeva, the last king of Simraongarh, was able to escape his life after the final destruction of the city, fleeing towards the forest and the mountains. In spite of his death, his family, through complex political events, was somehow able to gain influence in the courts of the Kathmandu valley, and eventually connected itself to the rising power of the Mallas. The Karnata and the later Oinwara courts of Mithila were important cultural and scholarly centers, exerting a long–lasting influence on the orthodox Hindu culture of the following centuries Choudhary 1976; Karanth 1979, Joshi 1983).

Because of the frequent military attacks and political interference of Simraongarh in the politics of the valley of Kathmandu between the 12th and the early 14th centuries, as well as for the influence of the refugees from Mithila, the Karnata kings were later recognized as 'rulers' of Nepal, and the Mallas made a conscious attempt at manipulating the official royal genealogies, claiming a direct descent from Nanyadeva and Harasimhadeva. Several authors have questioned this reconstruction, and demonstrated that the actual historical events were much different (see Joshi 1983; Petech 1984: 24–28; Shaha 1989). According to several authors, the influence of the orthodox Hindu culture brought by the refugees from Mithila is still evident in many aspects of the social and religious life of the Kathmandu Valley (e.g. Joshi 1983: 27; Mishra 1988; Shaha 1989: 47). Still today, Taleju Bhavani, the deity traditionally considered to have been the household goddess of the Karnatas of Simraongarh is a prominent deity of the valley of Kathmandu (Singh and Gunand 1966: 118; Joshi 1983; Mishra 1988) The goddes, according to the tradition, was brought to Nepal by Harasimhadeva or his wife after the fall of the capital of Mithila.

In spite of the great importance of Simraongarh in the history of Nepal, not much is presently known of its archaeology and history. Previous exploration includes the description of the site by famous travellers such as the Capuchin father Cassiano da Macerata, in 1739 (Petech 1956: 1–142; Cimino 1986, 1989); Colonel Kirkpatrik in 1792 (1811); The fortifications were also visited by the Rana ruler Jung Bahadur, only 1 month before his death in Terai, between February 8th and 15th, 1877 (Bahadur Rana 1909: 306). The first archaeological report on the ruins of the city was written by Hodgson (1835) after what he defined as a "hasty visit'' to the ruins, still covered by a dense jungle. He described the walls, the ditches, the remnants of the medieval monuments on the mound of Raniwas, the most important archaeological elevation of Simraongarh, and the beautiful sculptures collected on the site. The early report of Hodgson were the source on which later visitors based themselves, including A. Cunningham (see Patil 1963 for reference). The last first-hand archaeological report was published in 1973 by T.O. Ballinger of the University of Oregon, who visited the site in 1958. Ballinger described the Rana temple of Rama and Sita and some of the sculptures seen by Hodgson.

Historical sources dating to the times of Simraongarh are few and not very informative, but relatively coherent. Some Islamic manuscripts report the circumstances of the final defeat of Harasimhadeva and the destruction of Simraongarh (Choudhary 1970: 48–58). These sources agree on the core of the events, which is also independently confirmed by the Nepalese chronicle known as *Gopalarajavamsavali* (Vajracarya and Malla 1985:149).

Moreover, we are left with 4 inscriptions of the Karnata court, among which a famous inscription of Nanyadeva reportedly found at Simraongarh and dated to 1097 (Sinha 1979: 35). Indirect evidence comes also from the Deopara inscription of the Bengali king Vijayasena (Khielorn 1892) which mentions Nanyadeva among a list of defeated rulers. Another fragmentary inscriptions recovered at Simraongarh in 1991 and translated by R. Garbini (in this volume) seems to mention king Ramasimhadeva, one of the most important kings of the dynasty. It was under the region of this king that Dharmaswamin, a Buddhist Tibetan pilgrim, visited Simraongarh in 1236 (Roerich 1959). The text contains sketchy but unvaluable information on the conditions of Mithila in the 13th century AD, and a description of its capital, with its walls and ditches, doors and armed guards. At the moment of this visit, Simraongarh was under the pressure of Islamic armies; for this reason, according to Dharmaswamin, Ramasimhadeva had to restore and enforce its defences.

A trench through the main defence rampart

The ruins of Simraongarh are still enclosed within an impressive system of earthen ramparts and infilled ditches (fig. 1). The main enclosure measures about 7.5 km in direction north–south, and about 4.5 km in direction west–east. The ground plan of this fortification resembles an irregular rectangle, with the major sides oriented in direction north–south. The corners of the rectangular fortress have symmetrical projections in form of huge rectangular bastions. As we shall show, the city ramparts at west and east were built over two parallel natural embankments emerging from the floodplain, oriented north–south. All along the western side of the fortress is visible a dried, meandering river bed. Observation of aerial pictures and surface survey indicate that this ancient course was connected to the ditches of the fortification system through a network of dams and artificial canals. Further west, the floodplain is watered by a series of parallel streams debouching into the Sikrana, an affluent of the Buhri Gandaki, a partially dried course marking the ancient bed of the present Gandaki. During the rainy season, the eastermost of these streams (known as the Jamuni) overfloods the site breaking into walls and its waters are used by villagers for irrigation.

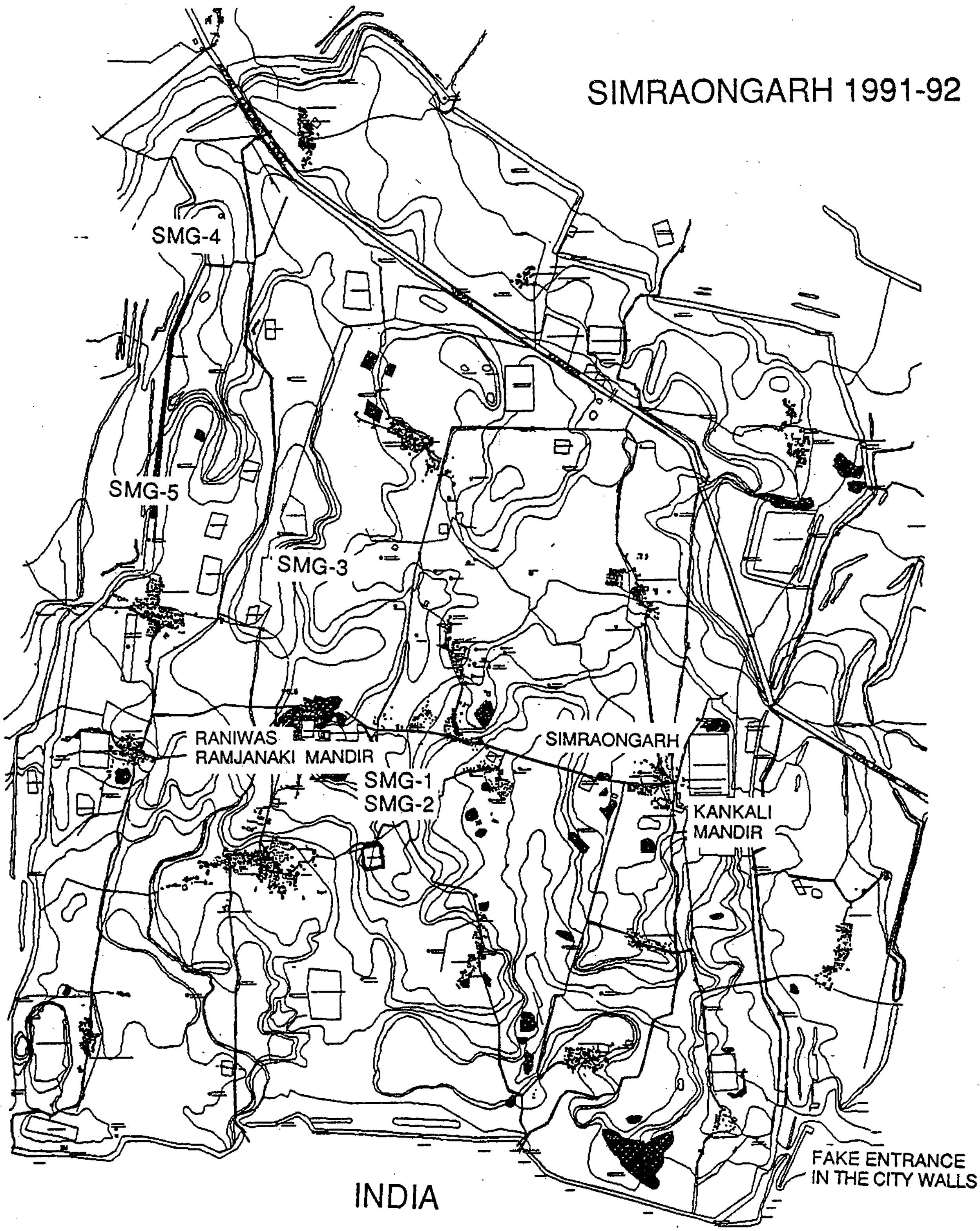
SIMRAONGARH 1991-92
SMG-4
SMG-5
SMG-3
RANIWAS
RAMJANAKI MANDIR
SMG-1
SMG-2
SIMRAONGARH
KANKALI
MANDIR
FAKE ENTRANCE
IN THE CITY WALLS
INDIA

FIG. 1

Along the east side, at about 4 km of distance, lies the bed of the Arwa Nadi, another affluent of the Sikrana.

On the south side of the fortress, the international boundary between India and Nepal runs at the foot of the main inner rampart, and here part of the earthen walls remains in Indian territory. Nowadays several villages of various size are busy with building activities and agriculture within and across the great enclosure. The main feature of the fortification system is an inner rampart, which, in some points, still rises more than 6–7m high. The remnants of the rampart are distinguished by the presence of a wall built with fired bricks, now buried, in some points showing regular projections. Unfortunately, most of this imposing structure has been mined for recovering bricks, and only small patches of undisturbed stratigraphy were left for study.

Outside the main rampart, in several points, in spite of the recent heavy agricultural disturbance, one can still recognize a system of lower concentric earthen walls, alternating with as many minor ditches (figs. 1, 2). Looking at these structures, it is easy to understand why in later times the defences of Simraongarh were remembered as a "labyrinth" (Vidale and Lugli 1991–92).

The contemporary hydrography of the compound is deeply altered by recent works. The Terai Eastern Canal enters the walls in the north–western corner, and crosses diagonally the whole site An artificial network of secondary artificial courses brings water to the villages and the fields. The site of Simraongarh, most probably, was exploited in early times because of its favourable topographic setting; the medieval capital was built on the base of a well–planned urban and hydrographic project, and the reconstruction of the original course of the river and its relationships with the walls, the ditches and the inner citadels, gardens, ponds and fields is a primary aim of our future investigations. The ditches had to be provided with a constant, well controlled flow of water; inside the fortification, the walled citadels surrounded by ditches should have been connected with the outer ditches and with inner ponds and reservoirs. The "labyrinth" was at the same time a powerful defence apparatus, a large–scale hydraulic system for protecting the city from floods and regulating agriculture withi and around the walls, and a powerful symbolic apparatus for representing the sacrality of the royal power of creation. The whole city should have appeared as a endless extension of walled enclosures, concentric ditches, canals, ponds and tanks flanked by rows of trees and fields: actually, this picture closely matches the brief but lively description left by Dharmaswamin (Roerich 1959: 58).

Given the almost complete destruction of the fired brick wall of the main rampart, we decided to carry out in 1992 a short rescue intervention for recording its techniques of construction and, if possible, its chrono–stratigraphical setting. We selected a point in the north–eastern corner of the enclosure, where the inner fired brick wall was already exposed in section and appeared to be reasonably preserved. This point also seemed to be the most appropriate for observing the interaction between the wall and the fluvio–morphological setting of the nearby river. In the north–western corner of the fortification system, still nowadays across the fields are clearly recognizable not less than 5 parallel banks possibly protecting the walls from a band of an ancient meandering course of the Jamuni river.

The trench we excavated was 70 X 3 m long, and was oriented according a pre-existing agricultural cut in the wall. As we tried to respect as much as we could the integrity of the monument, our section resulted slightly oblique to the local axis of the wall, with an orientation of 62° in direction north-north-east. The excavation took about 2 weeks and the employment of 30 workers. The maximum depth of the archaeological deposits was 4.5 m in the centre of the bank.

Our goal was to obtain a diachronical section reaching the natural deposits below the man-made layers, and connecting the main bank with the hypothesized nearby ditch. This would have also allowed us to study the interaction of the fortification system with the surrounding hydrological setting. It is well known that ditches, besides revealing important functional features of urban behaviour, may represent efficient archaeological traps preserving key information elements on the interaction of a "city" with its surrounding environment. Nowadays, this area is characterized by an intensive agriculture closely depending upon irrigation from wells and artificial canals, and this nowadays requires a high level of social and political management, both on the local and the district scale. We may presume that 1000 years ago a similar organization could be maintained on the base of regimentation and control of the water table and natural channel floods.

Obviously, by focussing on the interpretation of vertical sections we limited ourselves to a diachronical, processual evaluation of the rampart, while in order to study important aspects of local settlement and building technology one would have required horizontal exposures. As a consequence, some evidence we gathered with our section at SMG-4, section could not be tested horizontally, and therefore remains confined to an hypothetical ground.

SMG-4: the archaeological sequence of the main rampart

Fig. 2 shows the section of the trench; figs. 3-7 illustrate as many stratigraphic diagrams (of the type usually called "Harris matrix") relative to the most important stratigraphic episodes of the same section. The main phases of building, life, restoration and abandonment of the rampart we could recognize are represented as separate blocks, in which time moves from the base to the upper part of the diagram. In the following description, the various stratigraphic units are simply identified by their field number enclosed in parenthesis: for example, stratigraphic units nos. 4, 5, 6 will appear as (4), (5), (6). When stratigraphic units are negative interfaces (in the sense of Harris 1979), that means surfaces produced by an event of excavation or erosion, they will appear as n.i. (4), n.i. (5), n.i. (6).

Natural substratum and possible traces of a pre-defence settlement (figs. 2 & 3)

The natural substratum below the rampart is a ridge of sand and silty sand slightly protruding from the present floodplain, formed by layers (50), (51), (52), (117), (116), (115). On the top of this natural ridge we could observe the residues of the natural soil. This soil was partially removed by n.i. (231) when the ridge was settled, most probably because its elevation offered protection against floods. The first phases of occupation we could identify in section are represented by the poorly preserved remains of layers (53) and (174), bearing traces of post-holes, decayed traces of fires, charcoal bits, and few, scarcely diagnostic potsherds. We are dealing with the remains of light wooden structures: no bricks were observed in these layers. Apparently, later the site was abandoned, and another natural soil developed on the site.

The rampart: first phase of construction (figs. 2 and 4)

The surface of the ridge seems to have been prepared through an extensive removal of the surface sediments, attested by n.i. (49). The inner core of the rampart in its first phase of construction is formed by a regular sequence of piled layers of sand alternating with silty sand: layers (76), (75), (74), (73), (72); (70), (85), (77), (69), (83), (55), (71), (96), (81), (89), (102). The alternance of lenses of sand with layers of silty sand is a well known technique for this type of structures in fluvial environments. On the top of this core was then erected the wall in fired bricks (93), provided with the shallow foundation trench n.i. (91). The wall was about 1 m thick; the bricks were laid with a silty clay mortar. After the erection of the inner core, and together with the building of the upper wall in fired bricks, on the eastern side the builders erected a cage-like frame of light wooden elements, most probably made of bamboo poles: (57), (56); (63a), (63b), (63c). We could excavate with horizontal cuts a limited portion of this frame, whose function was to retain additional layers of sand and silt along the base of the sandy-silty core: (67), (68), (66), (78), (64); (62), (58). In this phase the rampart, at the end of its construction, emerged for at least 2.5 m from the surface of the old natural ridge; we have no hint on the actual height of the wall in fired bricks, but we should not be far from the truth in imagining a height of some meters. The total width of the rampart amounted to about 15 m. In front of the rampart was excavated a large ditch.

The main ditch (figs. 2 and 4)

All the material used for the construction of the rampart, first phase, was formed by natural sediments excavated from the main ditch in front of it. The base of the ditch was labelled n.i. (158). It represents the surface where the excavation stopped. In winter 1991, the water table was encountered at about 2 m below the present agricultural surface, and prevented us from exploring the actual depth of the ditch. Judging from the stratigraphy's trend, the ditch could have been 3 to 4 m deep, and was not less than 15 m wide. On its eastern side, layers (156) and (157) attest the partial erosion of the rampart within the ditch during its early phases of life. As expectable, the exposure of the ditch due to weathering, growth of vegetation and surrounding human activities caused a progressive filling, but, as we said, it was impossible to observe the lowermost filling soaked with water. A residual layer we ascribed to this early process of filling is (227). Interestingly, we have evidence of large roots and other forms of biological disturbance penetrating in ancient times within these erosive formations, suggesting that trees were maintained in the strip between the rampart and the ditch. This is the case of units (160), (161), (232).

The rampart and the main ditch: second phase of construction (figs. 2 and 5)

After an unknown interval of time, the structure was partially levelled and rebuilt. This is revealed by a series of extensive negative interfaces marking the removal of the topmost parts of the rampart: n.i. (208), n.i. (207), n.i. (209), n.i. (97), n.i. (94), n.i. (82). In particular, n.i. (97) and n.i. (94) correspond to the demolition of the fired bricks wall (93), whose bricks were reused for a new wall, labelled (80). This new wall was built about 1 m to the east; it might have been slightly thicker than the previous one. The thickness of the bricks, in this wall varies from 5.1 to 4.2 cm; their width from 16.5 to 20.5 cm; their length from 19 to 24.5 cm. The study of the structural features of the new wall showed that it had been erected simultaneously with the deposition of a new series of thick, extended lenses of sandy silt: (219), (59), (60), (42); (40), (39), (37); (43), (44), (41); (47), (119); (35), (36), (22), (34), (33). The builders raised contemporarily rows of bricks and packed layers of earth, so that the wall segments and the inner lenses of the earthen rampart appear regularly interfingered. It should be observed that layers (41) and (47) have the same function of the wooden frame of the previous phase, i.e. to support the base of the rampart during its piling up. Unit (38) is a trace left by a single bamboo pole, having possibly analogous implications. In this second building phase the residual width of the rampart was at least 20 m, and the height exceeded 3 m. During the earlier period of activity, the ditch, as we said, came to be partially filled. Stratigraphic analysis of the filling showed that, in the frame of the restoration and rebuilding of the rampart, the main ditch was re-excavated by n.i. (226). If this interpretation is correct, the ditch, in this second phase of life, had a maximum depth of 2 m.

The outer ditch (figs 2 and 5)

At west, about 15 m west of the western side of the main ditch, our section cut another small ditch, the first of the concentric series of secondary earthen ramparts mapped on surface and visible on the aerial pictures. From a strictly stratigraphical viewpoint, both ditches are included between the earlier man-made layers on the top of the natural geological substrata and the recent agricultural layers, and for the moment it is not possible to ascertain their relative chronology. Although positive proofs are missing, this second ditch could be roughly contemporary with the second building phase of the rampart. This might be suggested by the fact that in its filling we did not see traces of re-excavation, and therefore the process of filling would be paralled by the second, and final phase of "life" of the main ditch. On the other hand, its excavation would correspond to the effort of expanding the defence apparatus visible in the second phase of the rampart. The question, anyhow, needs further research. This second feature was only 5 m wide and 1.5 m deep. The base of the ditch was labelled n.i. (175); n.i. (190) was interpreted as a post-hole from a wooden element sunk into the ditch side. We may also presume that the earth excavated from this second feature was piled into a secondary rampart, at west or east; unfortunately, the recent agricultural transformations removed any positive evidence.

Life, destruction and decay of the rampart and the ditches (figs. 2 and 6)

Outside the face of the fired bricks wall, on the top of the rampart, at west, units (98), (99), (100) represent as many surfaces of trampling and/or partial erosion connected with human activities along the fortification. In particular, (100) appeared to be a limited *talus* from the wall, rich in potsherds which suggested local discard of rubbish. On the top of (100) we identified n.i. (214), marking the first processes of erosion on the top of these man-made sediments; in turn, this surface was sealed by layer (101) which appears to have been formed by loose sediments coming from the wall or the earthen rampart. Deposits such as (100) and (101) might be related to the fault lines and partial collapses visible within the structure of the fired brick wall (80), and could actually mark moments when this standing structure was affected by the first processes of decay. At east, along the lower residual surface of the earthen rampart, layer (19) was similarly interpreted. Sediments produced by early phases of decay were later partially eroded away, as shown by n.i. (215) at east and n.i. (212) at west of the wall remains. The process of erosion and partial decay of the rampart continued with more intensity with layers (18), (109), (110), in which fragments of bricks become larger and more common, as well as other erosive surfaces. These layers are what one would normally expect during the life-time of a unstable earthen rampart exposed to human activities and monsoon weathering. In our reconstruction, we assumed that, in a given moment the fortress had to be captured, and the walls were partially destroyed. Unfortunately, the ancient surfaces of destruction have been removed or perhaps "cumulated" and transformed by more recent processes of erosion, pedogenesis and trampling, in the Harris diagram, these destruction interfaces have been somehow inductively labelled as n.i. (20), n.i. (224). Then, after the destruction, the main phase of collapse of the fired bricks wall is attested by the massive layer (111), formed by a huge pile of fired bricks sealing at west the eroded face of the rampart. On the opposite side, layers (16), (17), (15), (14), (13), (12), (11), n.i. (23) and (24) are ascribed to the same phase of collapse and to the relative downslop erosion.

As far as the ditch is concerned, its second phase of "life" (i.e., the period of time in which it carried a certain amount of still, muddy water and paludal vegetation) is marked by the basal layers of the new sequence of filling. In layers (155), (154), (153), (152) we could observe the sedimentary traces of a relatively fast accumulation of organic material in conditions of stagnating water, as one would expect in the conditions we hypothesized. In the outer ditch, a similar phase distinguished by presence of stagnating water is evidenced by the sequence of layers (189)– (187). In the main ditch, these layers are interrupted by n.i. (225), an erosion surface carrying down substantial amounts of sand and brick debris. We correlate this erosion surface with the destruction of the rampart of the second phase and its wall. After this episode, the continuous sequence formed by layers (151)–(146) may be related with the ensuing conditions of abandonment and increasing erosion of the structure, and the consequent progressive filling of the ditch by redeposited sandy silt. The abandonment and filling of the minor western ditch most probably obeyed to analogous dynamics, affected by the nature of the local surrounding sediments and substrata; this process is attested by layers (186)–(177).

A period of abandonment (figs. 2 and 6)

After the destruction and the early stages of erosion, this area was abandoned, and in time natural soils could develop on the ruins of the rampart and on the surface of the partially infilled ditches. Later human interventions had the effect of cancelling great part of the sedimentological evidence of this phase of pedogenesis. Nonetheless, layers (173), (172), (202), at the western side of our trench, clearly show that a natural profile evolved over the filling of the minor ditch, demonstrating that after the fall of the fortifications, at least in this spot, the site was invaded by forest, by a covering of shrubs or some other form of uncontrolled vegetation. Across the rampart and the main ditch this (presumably long) period of local abandonment is marked by a long series of erosion surfaces and layers laid by extensive erosion processes. This sequence starts with n.i. (216), n.i. (211), n.i. (210), n.i. (213). Interestingly, within the main ditch we have evidence of at least one post-hole and traces of a fire, showing an episode of human activity within its dry, partially filled surface: see units n.i. (166), (165), (164), and the sequence (143)–(145). At east, the sequence of erosion-redeposition from the top of the rampart includes (10), n.i. (9), (8), n.i. (6), the powerful runoff layer (5); (31), (25); (114) and (113) on the top of the bricks fallen from the wall, followed by other layers and by later disturbances by vegetal roots, such as (106), (107), (108), and others; within the depression of the main ditch, n.i. (224), (141), (140), (142), (200), (138), (137), n.i. (223); and substantial colluvial layers such as (135), (134), (201), (132), (136), (133).

The recent agricultural phase (figs. 2 and 7)

In relatively recent times, the whole area underwent a large-scale, radical transformation. Our observations suggest that large portions of the earthen structures (particularly outside the residues of the main rampart) were levelled, the ditches were finally filled, and extensive portions of land were cultivated. East of the rampart, the contemporary agricultural layers appear as units (1) (the ploughed field) and n.i. (3), the base of the ploughing horizon, recognizable because of its distinctive, broken profile. On the eastern side of the rampart, layer (4) represents the result of activities of excavation and re-deposition, aimed at making space for a pathway running all along the structure. The pathway, in section, is marked by the following units: n.i. (26), (27), n.i. (28), which cuts also layer (4), (29), and the contemporary trampling surface (2). On the upper parts of the rampart, layers (30) and (32) show the effect of very recent pedogenesis. On the western side of our trench, we could identify at least three different agricultural horizons superimposed one on the other: layer (139), with its lower ploughing n.i.(228); layer (130), with its lower ploughing n i. (228; layer (128), with its lower ploughing n.i. (129). Aside these agricultural coverings the farmers maintained two narrow irrigation facilities, namely (127) and (222), with their n.i. (126), for the field ploughed in 1992; and (169), with n.i. (168) for the previous horizon (130).

Concluding remarks

In summary, the section revealed that in this area of Simraongarh a settlement was established on a natural ridge before the site was protected with a massive system of rampart and ditches. Unfortunately, during the excavation of our section very few potsherds were found in the layers below the rampart. They are currently under study, but they do not seem to be very informative from a typological point of view; nor we found charcoal we could use for a C14 date. The chronology of this early settlement, therefore, is left for future research. The section also showed that the fortifications of Simraongarh were built in two different phases; in both cases, the fort was built with a similar, complex technique, using layers of sand and silt, frames of bamboo poles or other wooden elements and erecting a wall of fired bricks on top of the rampart. As no archaeological materials were found within the cores of the rampart, for the moment we may just limit ourselves to hypothesize that the ramparts and ditches were built during the power of the Karnata dynasty i.e. in the period of time from 1097 to 1326, and tentatively attribute the destruction of this part of the fort to the army of Ghyasuddin Tughluq. One would be also tempted to relate the evidence of rebuilding of the rampart to what reported by Dharmaswamin, according to whom in 1236 king Ramasimhadeva restored the defences of the city threatened by Islamic armies; but this is only a conjecture. The abandonment of the rampart, with the evidence of its long erosion processes, should range from the Islamic conquest to the recent agricultural expansion.

We stress that, in the present state of our research, the chronology of Simraongarh is still a very open question, and could reserve in the future unexpected discoveries. Presently, we have to rely on the scanty information provided by few ceramics and the first two C14 dates we obtained in our preliminary exploration of the periphery of the Raniwas mound, in the centre of the site. In 1991, we cleaned a long section recently cut by an artificial irrigation canal through the periphery of this feature. The section (Operation SMG–1, see fig. 1) was recorded and sampled for pottery, paleobotanical remains and C14 dating (Vidale and Lugli 1991–92). The section was rather complex, due to intensive re–excavation of the upper deposits in ancient and recent times.

The lower layers at SMG–1 were preliminary labelled as Horizon 1. They showed at least 3 different phases of occupation. The first settlement of Raniwas developed along a sand bar formed by an ancient flood channel. Horizon 2 was represented by a set of rectangular pits filled with dumped ceramics, lenses of yellowish silty sand (perhaps produced by decay of plaster erode from dwelling units) and thick, dark lenses of charcoal. One of the pits contained, in the upper layers of its filling, a fireplace *in situ*. This suggests that these pits, rather than being simple dumping places could be occasionally used as living or special activities structures. In turn, the pits were later cut by a series of large pits and trenches filled with ash, fish and other animal bones, brickbats, large amount of ceramics, animal figurines, some metalworking slag and few flakes of semiprecious stones. These trenches seem to have been used as dumping and drainage facilities for substantial brick–constructed houses, almost completely destroyed by later brick robbing pits. Traces of wooden posts and planks were identified within the trenches, suggesting that they were maintained and periodically cleaned. This sequence was later disturbed by a long series of brick robbing pits, where we found few fragments of Islamic glazed ware. A preliminary study of the ceramics recorded at SMG–1 showed that the chronological range of this specific site of

Simraongarh could be approximately included between the IX and the XIV century AD.

2 layers rich in charcoal were sampled for radiocarbon dating; they came respectively from the top of one of the pit structures of Horizon 2 and from the bottom of the trenches immediately above, The determinations were made by G. Calderoni of the radiocarbon laboratory of the University "La Sapienza", Rome.

SMG-1, SU (50) Tconv = 915.0+/-65*
Rome-222 corrected to 1022-1209 AD**
SMG-1, SU (61) Tconv = 675.0+/-60*
Rome-221 corrected to 1277-1388 AD**
*Half-life 5568 BP
**One Sigma (Stuiver and Becker 1986),

In this light, our first work hypothesis is that the two phases of construction of the rampart and its ditches could actually be contemporary with the evidence of settlement at Raniwas, i.e. contemporary with the period historically associated with the Karnata kings. Future research on the fortifications and the cultural centres of the city will enable us to verify or disprove this hypothesis, as well as to ascertain the absolute chronology of the pre-rampart settlements.

CAPTIONS TO FIGURES

Fig. 1· Map of the site of Simraongarh with indication of the main operations carried out in 1991 and 1992. The inner rampart of the defence system runs for not less than 7.5 km in direction north-south and 4.5 km in direction east-west.

Fig. 2: Section of the test trench carried out in winter 1992 through the rampart and two ditches (operation SMG-4; see fig. 1). The section faces south; the east is on the left of the section.

Fig. 3: Simplified Harris diagram of the stratigraphic relationships of the units recognized in the natural substratum and the earlier man-made levels below the rampart.

Fig. 4: Simplified Harris diagram of the stratigraphic relationships of the units associated to the earlier phase of construction of the rampart and the excavation of the main ditch.

Fig, 5: Simplified Harris diagram of the stratigraphic relationships of the units referred to the second phase of building of the rampart, the re-excavation of the main ditch, and possibly of the excavation of the outer ditch to the west.

Fig. 6: Simplified Harris diagram of the stratigraphic relationships of the units representing the life of the fortification, its partial decay, destruction, abandonment and progressive erosion.

Fig. 7: Simplified Harris diagram of the stratigraphic relationships of the units referable to the recent agricultural expansion across the site; we identified three superimposed ploughing horizons and other features.

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