

## ANASUYA BHOWMIK

### VĀSTUMAṆḌANA A TREATISE ON ARCHITECTURE OF 15<sup>TH</sup> CENTURY A.D.

To edit the critical text of the Vāstumāṇḍana, 5 manuscripts have been consulted. Among those the mother one (A) was collected from B.O.R.I., Pune (it's record No.125) written in Devnāgarī script. It is complete with 35 folios, each consisting of 12-13 lines. The date is Samvat 1675 i.e. 1618 AD.

The second manuscript (B) is collected from the Asiatic Society (Record No. G5505). It is complete with 52 folios with 9-10 lines, written in Devnāgarī. Date-Samvat 1797.

The third one (C) was collected from the Oriental Institute, M.S. University of Baroda (Record No. 5317). It is complete with 49 folios but in between there are some missing folios (1, 2, 7, 10, 28, 29, 32, 43). Script is Devnāgarī. The lines per folios are inconsistent. There are 8, 9, 10 & 11 lines in different folios. The date is Samvat 1811.

The fourth (D) and fifth (E) one were collected from Saraswati Bhawan, Venaras (Record No. 33876 & 4530). (D) is incomplete with 18 folios. Script is Nāgarī. Numbers of line vary from 15 to 19. Date is not mentioned. (E) manuscript is complete. Script is Nāgarī, & folio No. 25. Numbers of lines are different in different folios, varying from 11-13 lines.

This architectural treatise was written in the golden era of Mewar. The author Maṇḍana Sūtradhāra while enjoying the royal patronage of Rāṇā Kuṃbha as state architect added to his credit a few more interesting books on architecture and sculpture (*Prāsādamaṇḍana*, *Vāstu-*

*maṇḍana, Vāstusāra, Vasturājavallabhamāṇḍana. Vāstuśāstra Rūpamaṇḍana Rūpāvātāra, Devatāmūrtiprakaraṇa).*

Being an author of 15th Century A.D. he had the exposure of previous Vāstuśāstras and Purāṇas such as *Mānasollāsa, Aparājita-ṛcchā, Mayamata, Samarāṅganasūtradhāra*. The author mentioned the names of Maya, Viśvakarmā, Bhoja, and Varāha from whose works he took help.

The edited text of the *Vāstumaṇḍana* consists of 870 *ślokas* which divided into eight cognate chapters.

This book deals with various interesting topics related to *Vāstu*, and starts with the description of *Stars, Planets, Muhūrtas* and their relations to a construction and *Āyādi Ṣaḍvarga*. The author advances further saying that the orientation of one's house could be decided according to the Zodiac sign of the person "Minavṛścikasimhānām patyuh pūrvāmukham gṛham" (V.M.Ch.1 Sl.41/42). Plants and trees have close relation with *Vāstu*. Almost all *Vāstuśāstra* books refer to different types of trees and their uses. Similarly *Vāstumaṇḍana* mentions 112 types of plants and trees to be planted or not to be planted, near one's house and their best suitability or unsuitability for a construction. In addition to this, the author suggested the determination of the shading time of a tree and creeper, recommending the careful discard of those which gives shades more than three hours.

*"Yāme gate sthite chāyā Vṛkṣa Prāsāda-Gulmajā  
Gṛheṣu doṣada proktā varjanīyā prayatnataḥ"* (1.84-85).

The author was concerned about the welfare of the owner of a house. So in his book he gives instructions to be followed by the owner and particularly on a few auspicious and inauspicious timings and incidences for a construction. He specifically mentioned of the subject matter on the painting to be barred from display on the wall.

*"Itihāsapurāṇoktaṁ vṛttāntaṁ pratirūpakaṁ  
Ninditaṁ ca gṛhe neṣṭaṁ śastaṁ devakule ca yat"* (7.10)

A short description of halls, *maṇḍapas, vedi*, royal throne, windows, roof, canopy, and beds are given on various occasions.

In the 6th chapter he mentioned different types of *śālā* houses as residential houses and suitable abodes. He says “*Dhruvādīni pravakṣyāmi bāsāya purabāsinām*” (6.1). This *śālā* house is defined differently in different books. Varāhamihira regarded *śālā* as hall describing *Ekaśālā* as one halled house or *Dviśālā* as two halled house. These houses could be made of grass, leaves or stones with wooden structure or wooden planks.

During 15th Century, a fort was an important element for the safety and security of a kingdom. Maṇḍana not only described a fort vividly but also pointed categorically to different locations and places to different types of people and Gods.

Geographically, in Rajasthan, water is a scarce commodity. Maṇḍana advised the king to have water reservoirs, wherever possible, within the fort.

“*Durge Bhūmivaśāt Kāryā haṭṭamārgajalāśayāḥ*” (3.20)

For the security of the fort he gave detailed description of two types of *yantra*:

(1) Saṃgrāmayantra; (2) Agniyantra.

From his description, we come to know of 84 types of *yantras*, available at that time. Amongst these 9 are for air, 9 are for water, 6 are firearms and rest 60 are *Saṃgrāmayantra*. His description of *Saṃgrāmayantra* is not very clear but from the description of the Agniyantra, a clear picture of a small cannon comes out. In mediaeval times, Rajputs used that types of small cannons which could be carried easily.

No other *Vāstuśāstra* books described these types of *Yantras*, only Samarāṅgaṇa sūtradhāra referred to this kind of machine for warfare, but did not treat in details in the text for secrecy as the author recommended its unfolding only to real jñāsu (SS.31.79/80).

In the 5th chapter, elaborate description of king's palace (*Rajagrha*) with temples, gardens and water tanks were given. A king's palace be surrounded by moat, three lines of boundary walls and four *gopuras* or main gates. It would be facing towards east but never towards west or north. The planning would be done on 81 *pada* square i.e. *Paramasayika plan*.

Now from this ancient sanskrit source, a blue print of a mediaeval fort with palace, comes out clearly. We know Rāṇā Kuṁbha (1433-68) built numerous forts and the prime of those was Kumbhalgarh (he built 32 forts out of 84 at Mewar). Incidentally there are references that Maṇḍana Sūtradhāra was the architect of the fort.

From his description, the writer made a textual planning of a fort and its inside palace. It may be presumed that it is the original planning of the 'Kumbhalgarh'. Supporting this view an example may be cited. In the beginning he writes "*Annya Vāstusthitam kṛtvā kuryād-durgam dṛḍhonnatam*" that means by demolishing other existing structures, one should built high and lofty forts.

In the Encyclopaedia of India (Rajasthan) p.107-108 it was written that "Kumbhalgarh was built by Maharāṇā Kuṁbha in 1448 on a rock plateau which was the site of an earlier Indian fortress".

More comparison can be done in future after visiting the site. Kumbhalgarh has the unique distinction that in all the wars against enemies of Mewar, it remained unconquered (except for once). It is a marvellous feat of military engineering. It withstood the vagaries of

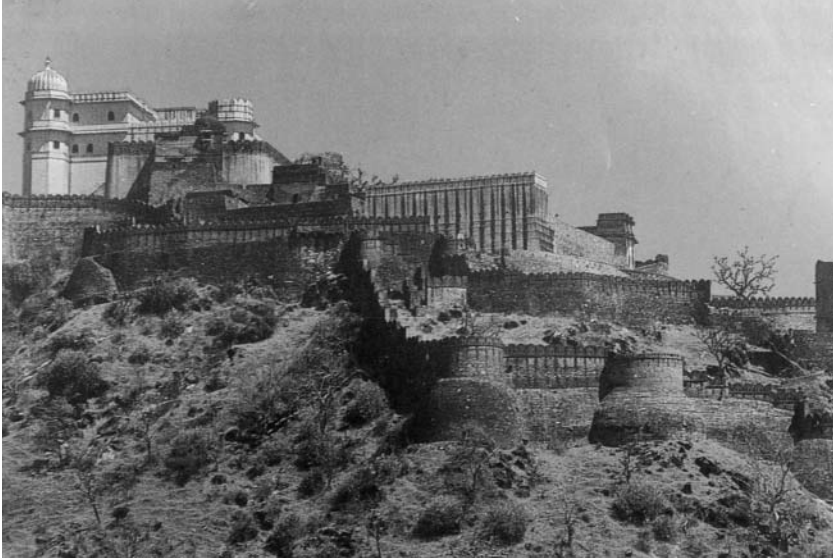


Fig. 1. Kumbhalgarh Fort

many centuries. There may be some additions and alterations after the original construction. But to reach the original scheme the description of this book is valuable. Mandana wrote that there had to be pathways all along the rampart of the fort, the same can be seen in one of the recent pictures (fig. n. 1) taken. This pathway could be used by horses, elephants and the army troops.

*“Gaḍamadhye Caturdikṣu mārḡā kuryātpradakṣiṇam” (3.22)*

According to the textual description, three sides of the fort would have market places, courtyard, water reservoirs, well etc. Water tanks will be on the back side. On the four corners of the rampart there would be small niches for *vidyādharas* within which there would be hidden seat for warriors.

*“Gūḍham yuddhāsanam koṣṭhe tasyām vā kārayet sudhiḥ” (3.21)*

Four corners would be reserved for four Gods, they are Sūrya, Ganādhīpa, Indra, Janārdana. These Gods would face towards east or west, but there would be other temples also whose Gods would face towards the south. Lord Gaṇeśa and Lakṣmi would be placed near the gate of the city. Śilpi, Raṅgākara, Antyaja, Śauṇḍika, Veśyā, Lubdhaka will reside on the corner plots. The shape of the fort may be Circle, Oval, Octagon or with eight corners, barley shaped, shape of Svastika or a Puruṣa

*“Vṛttam vṛttāyatastasre aṣṭapakṣam yavākritih svastikam puruṣākāram durgam” (3.32).*

The city inside the fort would be decorated with ramparts, markets, gates, palaces, gardens, pillar of fame etc. Now in the fifth chapter we find detailed description of the palace inside the fort. From this description a textual sketch has been prepared by the writer (exhibit no-3) which could be compared with the existing fort of Kumbhalgarh in near future.

The central place: 9 padas are kept only for pavilion (*Maṇḍapa*). On the four sides of that there would be halls like coronation hall, main

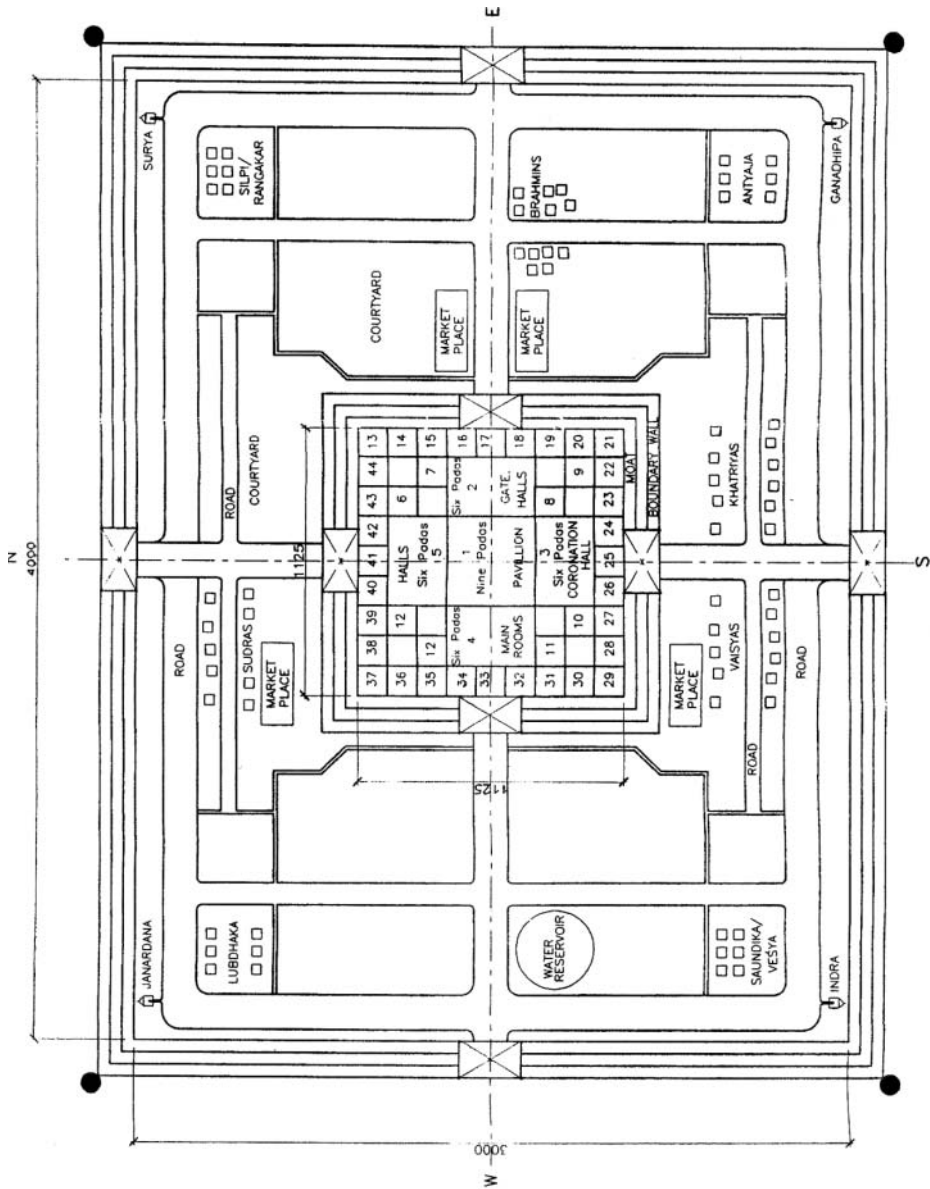
chambers, doors and other pavilions etc. On the four corners are residences of queen mother, queen and other women, places for gazing the sky, main-kitchen, dinning place etc. which occupy 2 *padas* each.

To conclude, a scientific co-relation between the description and the remains as on today, is absolutely necessary. The existing monument of Kumbhalgarh is a proof that Indian Vāstuśāstra was scientific in nature. To understand its true essence, a joint survey may be necessary by architects or civil engineers along with a sanskritist.

### TEXTUAL IMPRESSION OF KUMBHALGARH

#### LIST OF PĀDA

- |                            |                |
|----------------------------|----------------|
| 1. CENTRAL PART BRAHMAPADA | 23. VITATHA    |
| 2. ARYAMA                  | 24. GRHAKSATA  |
| 3. VIVASVATA               | 25. YAMA       |
| 4. MITRA                   | 26. GANDHARVA  |
| 5. PRITHVIDHARA            | 27. BHRNGA     |
| 6. APA                     | 28. MRGA       |
| 7. APAVATSA                | 29. PITRE      |
| 8. SAVITRI                 | 30. DAUVARIKA  |
| 9. SAVITARI                | 31. SUGRIVA    |
| 10. INDRA                  | 32. PUSPADANTA |
| 11. INDRAJAYA              | 33. VARUNA     |
| 12. RUDRA, RUDRAJAYA       | 34. ASURA      |
| 13. ISA                    | 35. SOSA       |
| 14. PARJANYA               | 36. ROGA       |
| 15. JAYA                   | 37. VAYU       |
| 16. SAKRA                  | 38. NAGA       |
| 17. SURYA                  | 39. MUKHYA     |
| 18. SATYA                  | 40. BHALLATA   |
| 19. BHRSA                  | 41. SOMA       |
| 20. VYOMNI                 | 42. SAILA      |
| 21. VAHNI                  | 43. ADITI      |
| 22. PUSNI                  | 44. DITI       |



ALL DIMENSION ARE IN METRE

DO NOT SCALE

LEGEND: ● WATCH TOWER

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