

Jean Deloche, *Studies on Fortification in India*. Collection indologie 104 (Pondicherry 2007) ISBN 2-85539-664-6) ii+267 pp., 436 photos and drawings, 29 €.

Military architecture is the art of defence, not of attack. Although a wealth of books treats the splendid sacral architecture of India, Jean Deloche correctly points out the paradoxically obvious: Despite countless historic defensive structures in India, both large and small, surprisingly few scholarly works have dealt with them. Moreover, while defensive architecture is a popular subject of study in the West, to which numerous serious amateurs dedicate themselves and generate basic documentation, this is hardly the case in South Asia. Thus, a heavier burden falls on the author to take up the slack. In addition, problems arise from defective and unsystematic excavation documentation, a dubious inheritance which we all share in all countries. The abysmal documentation of the famous and important capital of the Vatsa Land, Kausambi, a national monument of the classical period, is a case in point. In a variety of previous essays over the years, D. has proven his competency and knowledge of the subject of defensive architecture and the history of technology.

The new monograph consists of six essays, ordered chronologically: India's most ancient fortifications, the Hindu system of fortification in South India (3rd – 14th century), the Muslim system in the Deccan kingdoms (15th – 18th century), Survival of the Hindu system in South India (15th – 18th century), Mysore hill forts (15th – 18th century), cannon artillery in South India (15th – 18th century), brief general conclusions as well as an index of places, things and persons.

This book succeeds the pioneering Sidney Toy, *The Strongholds of India* (London 1957); the information then available conditioned its small size and scope. Toy takes up his history chronologically with the medieval fortifications of India and Pakistan. A second major (here unmentioned) competitor is D. Schlingloff, *Die altindische Stadt*. Abh. d. geistes- und soz. Kl. (Mainz 1969), who approaches the same topic on the strength of indological texts and art historical monuments. Up to a certain chronological point both treat the same classical sites on the basis of the late 19th – early 20th century documentation. However, Schlingloff's excellent but seldom cited booklet centres exclusively on these, whereas D.'s text continues up to the 18th century and includes many additional interesting problems e.g. those brought about by the use of cannon artillery, which in other studies seldom find mention.

D.'s chapters correspond to the main developmental rhythm in defensive architecture. Developments in poliorcetic (siege) science for South Asia are still known only in outline (p. 70): The 14th century witnesses developments in fire-casting weapons other offensive artillery. The introduction of firearms in the late 15th – early 16th century in South Asia has repercussions in defensive architecture. These and European military developments have surprisingly little direct effect in India. For example, few fortifications with star-shaped bastions do not exist here (the English Ganjam fort in Orissa is an exception). Paradoxically, Indian engineers failed to adapt effective defences in the face of developments in artillery (p. 235). Surprising is the architectural revolution on the Deccan at the beginning of the 16th century (p. 140). This manifests itself as numerous public works in which the entire society participates. Many of the aspects which D. discusses were new to the reviewer – an archaeologist and not a historian of architecture.

The strength of D.'s pioneering work lies in the large number of photos combined in a text which illuminates his stated brief. Omissions include mud forts (cf. Yule, Early Forts in Eastern India, *Antiquity* vol 82 issue 316 June 2008 Project Gallery, <http://antiquity.ac.uk/ProjGall/yule/index.html>), wooden fortifications, defence against fire-casting weapons, mining and countermining, circumvallation, outworks outside the ramparts (despite D.'s mention of moats), fortification gardening – all aspects about which still little is known. Wooden fortifications were more common than most would have it, to judge from Megasthenes' *Indika*, archaeological finds and ethnographic information. The argument that wooden forts are vulnerable to burning is emphasized too much falsely to negate their existence altogether. Defensive measures can and have reduced this problem.

In the section on fortifications in ancient India, although D. mentions of curtain walls and towers (p. 21), the reviewer would hope for more information about the wall atop the glacis (Yule, *Early Historic Sites in Orissa* (Delhi 2006), digital Version: <http://archiv.ub.uni-heidelberg.de/savifadok/volltexte/2008/147>). These exist in traces, for example, at Mauryan Jaugada and Narla Asurgarh in Orissa. The original fortifications were far higher than one would believe solely on the basis of the preserved remains.

The subject of castramentation, that is the technique of building field fortifications for field and siege armies, forms a topic which arguably lies outside the author's scope. Till now, no one has really looked for them in India. Numerous examples are known in Europe from the Neolithic to the subrecent period. H. Neumann (*Festungsbau, -kunst und -technik* (Bonn 2004) 332) points out that from the 30 Year War, many appear reproduced in books. The reviewer knows a single potential example (Mohabhoi Sasan), in South Asia, a few metres north-west of the Sisupalgarh fortress, which may represent the remains of a siege fortification.

D. is a historian of architecture who interfaces directly with the history of art history and archaeology, less so than military history per se. He is master of his subject. This also is suggested by the limited number of titles listed in the bibliography from which he could draw. This study is affordable for students and institutions in the host country. The reviewer hopes that it will be better received there than other studies written by foreigners. Since many of the drawings and photos which D. publishes are historic, the archaeologist wonders what is left of the fascinating monuments themselves. Work in Sisupalgarh in 2005, revealed that this nationally protected monument was being built on in a commercial scale (Paul Yule and Corinna Borchert, *Sisupalgarh/Orissa: Illegal building operations in the North-West Area*, privately distributed, 2005 digital version: <http://archiv.ub.uni-heidelberg.de/savifadok/volltexte/2008/146>).

The text is nicely printed on fine white semi-gloss paper. Photos and drawings are excellently conceived, rendered and printed. Many derive from the author himself. The paperback binding is Spartan.

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