

HISTORY OF DOCUMENTATION

John M. Fritz

Here we report on research carried out by the Vijayanagara Research Project (VRP) between the years 1990 and 2000. But first we summarize the origins of the project and the work completed during each season between 1980 and 1989. Next, we turn to a more detailed chronicle of the research of the succeeding decade. We conclude with an account of the final seasons of research in the years since 2000.

Prologue: The First Decade

For publications of the work of the VRP between 1980 and 1989 see Other Monographs: Fritz, Michell and Nagaraja Rao 1984; Reports: Fritz 1985a, 1985b, 1990, 1991a, 1991b, 1991c and 1993, Fritz and Michell 1984a, 1985a and 1991, Michell 1981, 1983, 1985, 1990 and 1991, and Sinopoli 1991; and Research Articles: Junker 1985, and Sinopoli 1983, 1985d and 1990. (For full references see Project Bibliography, pp. 411-22.)

Origins

The Vijayanagara Research Project traces its origin to Dr George Michell, an Australian citizen and independent scholar living in London. He first visited the site early in 1973 when he and a small team were documenting Early Chalukya temples in the Badami region. He returned in 1979 to meet with Dr Vasundhara Filliozat (art historian, Paris and Pondicherry) to discuss the possibility of co-editing a volume for Marg Magazine, Bombay.¹ Later that year in Melbourne, Michell recruited the photographer John Gollings and three architecture students from Deakin University to undertake documentation at Vijayanagara. Together with architecture students from Delhi

and Ahmedabad, they formed the first team at the site. Marg published *Splendours of the Vijayanagara Empire, Hampi* in 1981. From this limited beginning grew an international, interdisciplinary effort to document, analyse and explain the architectural and artistic record of the ruins of this great city.

January 1980

The majority of the participants in the first season were volunteer architecture students from India and abroad who paid their own fares to the site where they were given food and a place to stay. This set the pattern for future seasons. Over the next two decades, more than 200 individuals with training in architecture, archaeology, photography or in other useful fields assisted our documentation at the site (see Appendix).

In 1980 and 1981, Michell worked with Dr Vasundhara Filliozat and her husband Dr Pierre-Sylvain Filliozat (Indologist, Paris and Pondicherry). In addition to supervising the making of architectural drawings of selected religious and civic structures at the site, Michell also undertook to prepare a map of the site at scale 1:4,000. In 1980, he made sketch maps of what we later termed the Royal Centre and Sacred Centre. The map of the latter zone extended from the Krishna and Virupaksha temple complexes to the Tiruvengalanatha (Achyutaraya) temple complex.

Gollings, who had studied architecture in Melbourne, worked with Michell to document both the structures documented and their extraordinary natural setting. His images have helped to convey the beauty of the site and the arresting juxtaposition of ruins and landscape. Sometimes accompanied by his wife, the

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photographer Kate Gollings, and photographic assistants, he was to participate in eight seasons.

Visitors during this season included Mulk Raj Anand and Dolly Sahiar from *Marg Magazine*, Antony Hutt (art historian) and Dr M.S. Nagaraja Rao, Director, and C.S. Patil, Archaeology Assistant, Karnataka Department of Archaeology and Museums (KDAM). They were the first of a series of academicians, government officers, friends and even strangers whose stay with us ranged from a matter of hours to several days.

January 1981

Dr John M. Fritz (then Adjunct Associate Professor, University of New Mexico, Albuquerque) joined the team in the second season. His previous research was in the American Southwest where he worked on the relation of design in architectural and settlement layout to cultural meaning (Fritz 1978; see also Research Articles: Fritz 1987). He assisted Michell in extending the 1:4,000 sketch map to include all areas inside and adjacent to the walls of the Urban Core. (For a definition of the city's zones, see *Other Monographs: Fritz, Michell and Nagaraja Rao 1984*.) Fritz also wrote exploratory notes on the collapsed remains in two enclosures in the Royal Centre.

Nagaraja Rao visited the team once again during this period. He suggested that the Project form a cooperative relationship with the KDAM. Her encouraged Fritz and Michell to visit government officers in Bangalore and to submit a proposal to the Karnataka Government, which they did at the end of the season. The Karnataka Government kindly agreed that Fritz and his colleagues could work with the KDAM. Thus began a long and mutually beneficial relationship.

January 1982

In the third season, we worked closely with personnel of the Archaeological Survey of India (ASI) to prepare a 1:200 plane-table map of Enclosure V in the Royal Centre. Michell expanded the 1:4,000 sketch map to include areas north and west of Anegondi in conjunction with the dissertation research of Sugandha Purandare (Deccan College, Pune). Kiran Kapadiya (architecture student, Bombay)

documented different wall types in and around the Royal Centre. Deepak Kotecha recorded movement associated with rituals in the Virupaksha temple complex in Hampi, while Yamani Patil examined the organization of the city. Both architecture students at Ahmedabad wrote theses based on their fieldwork, the first of several such efforts by Project participants (see *Theses and Dissertations*).

Fritz began a systematic description of surface remains in the walled compounds of the Royal Centre, an activity that we expanded, with the aid of archaeological assistants during subsequent seasons. During their surface explorations, Fritz and Y. Patil discovered mounds containing palaces in an area subsequently termed the "Noblemen's Quarter" and excavated by the KDAM (Nagaraja Rao 1985).

1982 was the first season that students from Sophia College, Bombay, received training in archaeology and art history. Nine students spent a week at the site working with the KDAM, under the direction of their teacher, Ms Purnima Singh. While the Sophia College students did not work directly with our team, they shared with us the KDAM camp and, over the years to come, there were many lively discussions between the two groups.

January 1983

In our fourth season, Carla Sinopoli (graduate student, University of Michigan, Ann Arbor) joined our team and undertook pioneering documentation of earthenware ceramics from the site. She began with material excavated by the KDAM from the Noblemen's Quarter, an elite residential zone in the northwest quadrant of the Royal Centre. Laura Junker (graduate student, University of Michigan) joined Sinopoli at the beginning of 1984. Together they documented earthenware shards collected from the surface of a valley east of the Royal Enclosures and from the Islamic Quarter in the northeast quadrant of the Urban Core. In conjunction with Richard Blurton (archaeologist, London), they also described whole earthenware pots made by a local artisan and his family in the nearby village of Kamalapura.

Also in January 1983, Fritz met R.S. Ramamoorthy (Director, Topographic and Engineer-

ing Survey, Bangalore) who was a retired officer of the Survey of India and a proud advocate of the techniques he had learned from British surveyors. Ramamoorthy had established one of the few private surveying companies southern India. He and his team began what was to become a long association when they surveyed the Enclosure XIV (Zenana) and adjacent areas. We decided on a scale and contour interval that would be large enough to show structures and smaller features, but small enough to handle the map sheets. The following season, we decided to expand the coverage of mapping and it became necessary to settle on a standard size for map sheets and a system for designating them (see Fritz, *Types of Documentation*, this volume).

In late January and early February, Anila Verghese (historian, Bombay) accompanied Sophia College students to Vijayanagara for archaeological training; this kindled her professional interest in the site.

After the 1983 season, Michell and Fritz travelled to Australia where they spent two months at the Department of Architecture and Building, University of Melbourne. There, architecture students (several of whom had worked at Vijayanagara) inked pencil drawings from the site. With the assistance of Wolfgang Maschek (Indologist, Melbourne) Michell and Fritz worked on a preliminary report on the work in the Royal Centre (see *Other Monographs: Fritz, Michell and Nagaraja Rao 1984*).

December 1983 to February 1984

In the fifth season, Michell began a systematic inventory of standing structures in the Urban Core, outside the enclosures of the Royal Centre. Components of this work included architectural drawings by team members, descriptions by Michell and photographs by Peter White. The KDAM eventually published the resultant work (see *Other Monographs: Michell 1990*).

We were joined early in 1984 by Kathleen Morrison (graduate student, anthropology, University of New Mexico) who assisted us in writing descriptions of archaeological features in the Royal Centre.

One of our visitors this season was Phillip Wagoner (graduate student, art history,

University of Wisconsin, Madison), who was trained in Telugu language. Wagoner was familiar with a text that purported to relate details of the court of Krishnadevaraya, the *Rayavachakamu*. Stimulated to summarize passages shedding light on the city, he eventually undertook to translate the entire work (see *Other Monographs: Wagoner 1993*).

Following this season, we issued the (now) 1:5,000 Map Series as a bound pamphlet. In 1985, it appeared in the report of the KDAM (see *Reports: Fritz and Michell 1985b*).

December 1984 to February 1985

Prof. Anna Dallapiccola (art historian, South Asian Institute, Heidelberg University) joined our team during our sixth season. She had previously stayed at the site in 1971 and 1973 and visited the Project early in 1984. In July 1983, Dallapiccola organized the symposium, *Vijayanagara: City and Empire* at the South Asian Institute, Heidelberg University.² Her research at the site has focused on sculpture, beginning with the *Ramayana* reliefs in the Ramachandra (Hazara Rama) and Ramanuja temples, and continuing with stone and plaster carvings in all the major temples at the site, of which she has made a comprehensive inventory. Her interest also extended to the reliefs on the Great Platform (Mahanavami Dibba) and ceiling paintings in the Virupaksha temple complex. Throughout her many seasons with us at the site, she has been a font of Indological knowledge for team members.

At the beginning of 1985, Purandare and Michell supervised team members in drawing structures and correcting and expanding the coverage of 1:4,000 sketch maps in and near the town of Anegondi (twin-city to Vijayanagara) on the north bank of the Tungabhadra River. Purandare described the religious and civic structures for her Ph.D. dissertation on the site (see *Theses and Dissertations: Purandare 1986*).

During the summer of 1985, Michell and Fritz organized the exhibition, "Where Gods and Kings Meet," at the American Museum of Natural History, New York City, which opened in October and continued for five months (see *Research Articles: Fritz and Michell 1985*). This was part of the Festival of India in the USA.

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During this period, Fritz and Michell organized an informal get-together of scholars interested in Vijayanagara, in the former's apartment in New York City. Scholars present included Dr Carol Breckenridge (historian, University of Pennsylvania), Dr David Shulman (religious historian, Department of Asian Studies, University of Jerusalem), Sinopoli, Dr Burton Stein (retired professor of history, University of Hawaii) and Wagoner. This was to be only the first of many valuable discussions between archaeologists, art historians and historians.

January-March 1986

During our seventh season, we made no new architectural drawings. However, Brigitte Pascher (art historian, Frankfurt) documented the layout and sculpture of the Pattabhirama temple complex and developed a diagrammatic system for indicating the location of carvings on temple columns. She subsequently completed an M.A. thesis on this monument (see Theses and Dissertations: Pascher 1987). Dominic J. Davison-Jenkins (archaeologist, Cambridge) began documentation of hydraulic systems in the Metropolitan Region. He later completed a Ph.D. on the topic (see Theses and Dissertations: Davison-Jenkins 1988, reissued in Monographs Series, Davison-Jenkins 1997). Other work continued; namely, descriptions of enclosures, 1:400 mapping, and documentation of ceramics from excavations, from the surface and from a local market. The British photographer, Simon Everson, worked with assistants to record archaeological details.

In July, Dallapiccola organized the conference, *The Relevance of the Shastras to the Indian Arts*, at the South Asia Institute, University of Heidelberg, at which team members presented papers. Also during this season, Alison Rautman (graduate student, University of Michigan) made thin-sections of a number of earthenware shards from Vijayanagara and analysed their paste and temper (see Research Articles: Rautman 1991).

December 1986 to March 1987

In the eighth season at the site, our team stayed in a newly reconstructed *mandapa* at the east end of the Hampi bazaar. The architectural

team focused on pre and early Vijayanagara temples on Hemakuta Hill, the Virupaksha temple complex and shrines overlooking Manmatha tank. Dallapiccola documented sculpture and Wagoner recorded architectural forms of temples in these areas.

The surveying team made new 1:400 maps in the Royal Centre, Urban Core and Sacred Centre, and Fritz with Morrison checked maps previously made in the first two zones. Andrew (Dee) Foster, an assistant of Gollings, photographed ruined structures in the Royal Centre while Gollings continued his extensive photo-documentation of the site.⁵

Dallapiccola began her fruitful collaboration with Verghese, who stayed with us for more than a month. They began work on the *Ramayana* panels in the Ramanuja temple (see Dallapiccola and Verghese, this volume). Their joint work has resulted in several publications, including a monograph on sculpture at the site (see Monograph Series: Dallapiccola and Verghese 1998).

Prof. Ben Marsh (geographer, Bucknell University, USA) began a study of the physical landscape of the site, focusing on the use of natural resources. At the same time, Dr Natalie Tobert (ethnographer, London) began her research on the material culture and social context of the "royal village" of Anegondi. Pascher completed her description of the Pattabhirama temple near Kamalapura.

Early in 1987, R. Kalburgi (scholar, Hubli) began translating a published version of the Kannada text, the *Pampamahatmyam*. About this time, Vishnu Tirtha (*pandit*, Gangawati), working with Asim K. Das (Sanskritist, Vrindavan), began to assemble different versions of the related Sanskrit text known variously as the *Pampamahatmyam* and *Hemakutakhanda*. Vishnu Tirtha worked with two texts in Devanagari characters, one provided by the Project from the Mackenzie Collection (India Office Library, London), the other given to him from a private collection; he also consulted a published text transcribed from Telugu into Devanagari script. Das then translated the assembled Sanskrit version into English. Editing and translation was based on the printed text, which contains 32 chapters of the 52 chapter-long manuscript.

In April 1987, Das documented the Kalyan-

otsava of Pampadevi and Pampapati at Hampi; that is, the car festival celebrating the marriage of the reigning god and goddess, of which he subsequently prepared a report (Das 1987). He subsequently expanded this account based on his observation of later festivals (see Das this volume).

January-February 1988

During our ninth season, we returned to the KDAM camp in the Royal Centre, now newly provided with thatched huts with bamboo walls and concrete floors.⁴ Architectural drawings were prepared of gateways and doorways in the Royal Centre and Urban Core, hydraulic structures in the Irrigated Valley and an elevated structure near Kamalapura. In addition, architectural drawings of the Virupaksha temple complex, including shrines overlooking the adjacent Manmatha tank and structures in the bazaar were completed. Fritz described ruined structures in Enclosure XXV, while Dallapiccola revised her documentation of the Ramachandra temple and began description of sculpture at the Tiruvengalanatha, Krishna, and Vitthala temples.

Our surveyors continued mapping in the Urban Core, and Fritz with the assistance of Daniel Asquith checked and annotated approximately 24 map sheets in the Royal Centre and Urban Core. Billy Muir (photographer, Scotland) focused on ruined features in the Royal Centre.

In 1988, Dr Sinopoli (now Assistant Professor of Anthropology, University of Wisconsin, Milwaukee) and Morrison (doctoral candidate, University of California, Berkeley) began field documentation for the VMS with a team of assistants. This independent project, also affiliated with the KDAM, had as its initial objective the documentation of the region that encompasses the remains of the central city where the VRP had concentrated its efforts. (These scholars present a history of their accomplishments elsewhere in this volume.)

At the end of our first decade, the pace of work diminished. In September 1988, Michell began a one-year Mellon Fellowship at the Sackler Gallery of Asian Art, Washington, DC. It was later extended for three months. The Gallery kindly provided Fritz with space to

continue work on the Project. Consequently, we did not field a team in 1989. However, our surveyors continued mapping in the Royal Centre, Urban Core and Irrigated Valley during both 1989 and 1990.

The Second Decade

The general nature of our activities continued at the beginning of our second decade while the pace of our work picked up. However, the focus of our documentation gradually shifted away from the Royal Centre to the Urban Core and eventually to the Sacred Centre. This was true of our mapping, architectural drawing, description and photography. At the same time, we began our Vijayanagara Monograph Series and the emphasis of our publications shifted to the production of book-length works.

For publications of the work of the VRP between 1990 and 2000, see Reports: Fritz 1991c, 1993, 1996, 1997, 1999 and 2000.

January 1990

Fritz visited the site when the VMS was at work. He also met with our surveyors in Bangalore. Dallapiccola also paid a short visit.

November 1990 to March 1991

This season was one of our longest, lasting more than three months. Our surveyors mapped in the Urban Core. Fritz, with three British assistants (Peter Baxendale, Paul Cope-Faulkner and Martin Goodfellow), began a programme of intensive checking of maps prepared by our surveyors. They helped us to verify some 34 maps in the Royal Centre, Urban Core and Irrigated Valley. Rather than identify large complexes of associated features as we had done in previous seasons, we designated each constituent element with a unique number. We also attempted to develop a set of inclusive, unambiguous and mutually exclusive terms, or "key words", for different types of feature. At the same time, we developed a series of map symbols that would locate different types; for example, "s" indicated a sculpture, and a small circle, a mortar. We also photographed selected archaeological features in black and white while we verified maps and noted important

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information about each photographic frame, such as, the direction from which it was taken and the time of day. Data bases were created to record features indicated on each map and also for information about each photograph. Eventually we developed a data base to record the sequence of work on, and other information about, each map sheet.

Wagoner, with two American architects (Charles Orton and Tony Romming), expanded the documentation of pre and early Vijayanagara shrines on Hemakuta Hill and of the Virupaksha temple through a series of drawings of sections, plans and architectural details. Wagoner studied the stylistic development of architectural elements and the growth of the Virupaksha temple complex from pre-Vijayanagara times onwards. Architectural drawings also were made of a small complex excavated into stone and a shrine in the Royal Centre. In the Sacred Centre, drawings were made of the Virabhadra temple on Matanga Hill and the Kodandarama temple beneath the hill at Chakratirtha. At the same time, Dallapiccola documented the paintings on the ceiling of the *mahamandapa* of the Virupaksha temple. She also revised the sculptural inventory that was commenced in 1988.

Prof. John McKim Malville (astronomer, University of Colorado, Boulder) with two assistants (Bernard Means and Frank Occhipinti) made over 100 measurements of alignments of structures and of the relation of buildings to landscape features (see Research Article: Malville and Fritz 1996). Observations were made of some gateways and early temples on Hemakuta Hill and around Manmatha tank, all the major temple complexes of the Sacred Centre and several smaller shrines in the Royal Centre. In addition, the team noted the orientations of about a dozen palaces and the Great Platform and Audience Hall.

Among our scholarly visitors this season, Prof. Philip Lutgendorf (Hindi specialist, University of Iowa), was particularly interested to see places at the site connected with the mythology of Hanuman.

In 1990, Vishnu Tirtha became ill with tuberculosis and gave up work on the *Pampa-mahatmyam*. During 1991, Das took up the editing of the Sanskrit text and continued to

translate it into English. In February 1991, Patil introduced C.T.M. Kotraiah (retired archaeologist, ASI, Mysore) to the Project. Kotraiah agreed to assemble an annotated bibliography of published Kannada texts dating from the Vijayanagara period. Fritz developed an outline of topics designed to elicit information about the city and the activities of its elite. Kotraiah agreed to examine these texts to see if their authors touched on such topics.

December 1991 to February 1992

Our twelfth season lasted about three months. Our surveyors made new maps in the Royal Centre, Urban Core and Irrigated Valley, while Fritz and archaeologists from the UK (Cope-Faulkner, Antonia Doucherwaite and David Gibson) and USA (Heather M.-L. Miller) verified 49 sheets in the Royal Centre, Urban Core and Sacred Centre. We continued to photograph features located on verified maps and to enter records about the features and photographs into databases.

Architects came from India, the UK (Ian McDonald and Mark Webb), and USA (George M. Arnold, Jason Fischer and David J. Freed). Architectural drawings were made of gateways and palaces in the Royal Centre as well as the core of the Underground (Virupaksha) temple, perhaps the earliest shrine in this zone. A large structure cleared by the KDAM just inside the large gate at the northeast end of the Royal Centre was drawn. In the Urban Core, we also drew and described a walled complex near Malyavanta Hill (see Gibson and Miller, this volume).

We began an inventory of the Sacred Centre. Architects, led by Webb, drew temples, shrines and gateways in Map Series Squares MP, NF, NG and NL, and also the Chandramauleshvara temple in Map Square NB. Our objective was to publish a list of standing and significant collapsed structures comparable to our inventory of the Urban Core. This eventually appeared in 2001 (see Monograph Series: Michell and Wagoner 2001).

While Dallapiccola and Verghese continued to document sculpture at the site, the former began to record the reliefs on the Great Platform. Thus began the detailed docu-

mentation of this unique monument by members of the team, which will result in a future monograph. At their request, Arnold and Freed prepared measured drawings of several important figural sculptures on the Platform.

Nancy Malville (physical anthropologist, Boulder) documented and analysed skeletal remains encountered by the K DAM in 1989 when they were clearing features and excavating archaeological deposits in Enclosure XIII immediately south of our camp (see Research Article: Malville 1991, and also Devaraj and Balasubramanyam 1996). This ossuary contained the remains of several individuals who may have been killed during the sack of the city in 1565.

Das continued to edit and translate the *Pampamahatmyam* and by the end of the season had managed to edit and translate some 22 out of an estimated 52 chapters. Kotraiah examined more than 270 published Kannada sources by mid-1991. Early in 1992, Kotraiah presented an annotated bibliography of a limited number of sources, which might inform on urban and courtly life during the Vijayanagara period. During the following months, he began to excerpt information from some of these sources according to the topical outline developed by Fritz.

In this season, we encouraged some assistants to write short research papers on particular structural complexes at the site. These resulted in some of the articles published in this volume.

While not part of our Project, Lu Ann Wandsnider (archaeologist, Ph.D. candidate, University of New Mexico) stayed in the K DAM camp, documenting pastoral nomads who were grazing their flocks in the region, including in the harvested fields of the Urban Core, following the autumn harvest. Her understanding of the relation of agriculture and pastoralism was very enlightening. She also pointed out material modifications of the local landscape that remained on the surface of the site after the nomads abandoned their short-lived encampments.

December 1992 to February 1993

In late November, before the beginning of this season, a large and devastating flood occurred

on the Tungabhadra River. While the flood destroyed crops and animals and also caused some modern rubble walled structures to collapse in the river basin, it did very little damage to the monuments of the site. The waters extended part way up the east end of the bazaar in Hampi and almost completely inundated the Kodandarama temple at Chakratirtha.

Our season lasted about three months. We had one of our largest teams with members from India, Europe and the USA. For the first time we invited graduate archaeology students from Deccan College, Pune to receive training and contribute to our Project. More than 15 students joined our team this season. This happy association continued for several seasons. Notable among this group was S.K. Aruni who returned during several subsequent seasons. He later applied the techniques learned in our Project in his documentation of a later site in northern Karnataka for his Ph.D.

Our surveyors made new maps in the Royal Centre, Urban Core and Sacred Centre. Together with Cope-Faulkner and trainee assistants from Deccan College, five archaeologists from the USA (Janice Bailey, Daniel D'Atillio, Teresa Raczek, Linda Whitman and Joshua Wright), the UK (Paul Dungey), Sweden (Oscar Carlberg) and Switzerland (Sylvia Berti), Fritz verified maps in the same zones as well as in the Irrigated Valley.

Mark Webb and Erik Haugsnes supervised several architects from India (including Suchitra Srinivasan), the UK (Rachael James, Mark Scott and Webb) and the USA (Paul D'Onofrio, Jason Fisher, Haugsnes and Clare Weldin) as we expanded the inventory of the Sacred Centre in Map Series Squares MP, NB, NF, NG and NL.

We reproduce research papers written by several of these architectural and archaeology students in this volume.

During this season, Kotraiah presented an expanded list of annotated sources as well as translated excerpts from one text. From early 1993 through 1997, he translated excerpts from 32 texts, ranging in date from the mid-fourteenth to mid-sixteenth centuries. These passages were organized according to the topical outline referred to above. We gave

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copies of these translations to members of our Project as well as to several local scholars.

Tobert, working with Graham Reed (archaeological illustrator, London) and Jean-Pierre Ribière (photographer, Paris), completed her ethnographic description of Anegondi.

Wandsnider continued to work with pastoral nomads in the region. Verghese brought seven students for a one-week programme to learn about the archaeology of the site. Particularly notable among our visitors this season was Ms Francine Berkowitz, Director of the International Center, The Smithsonian Institution. Other visitors included Prof. Vidya Dehejia (art historian, Columbia University), Prof. S. Nagaraju (archaeologist, Central University, Hyderabad) and Vivek Nanda (Ph.D. candidate, urban history, Cambridge).

November 1993 to February 1994

The fourteenth season lasted three months. Team members came from India, Europe and the USA. Several Deccan College students also joined us, including Aruni and Samantha Bhiladvala, who returned twice more.

We surveyed new maps in the Royal Centre, the southern areas of the Urban Core and the Irrigated Valley. Fritz with Joshua Wright verified surveyed maps in these zones as well as the Sacred Centre with assistants from India (Aruni and Samantha Bhiladvala among others), Switzerland (Berti), the UK (David Cheshire, Zoe Clark, Jonathan A.J. Godfrey, Darren Lankstead, Nick C. Powell, Pip Stephenson and Alison Anne Telfer) and the USA (Bailey and Wright). Prof. Barry Lewis (archaeologist, University of Illinois, Champaign-Urbana) began an especially felicitous association with the Project when he volunteered to work along side our assistants. He has subsequently developed his own projects working on late and post-Vijayanagara period settlements in Chitradurga District, south of Vijayanagara, as well as on revenue maps of Mysore District produced by British officials in the early nineteenth century.

Haugnes directed a team of architects from Australia (Tim Martin and Dennis Daniel), the UK (Joanna M. Boyle, Simon Gedeye, Maria Jones, Katie Perrin and Mark Scott) and the

USA (Haugnes and John Henry Rice). They drew up a temple and stone bowl fragment in the Royal Centre, a shrine in the Irrigated Valley, and 103 temples, shrines, *mandapas*, gateways, and caves in Map Squares MK, NC, ND, NF, NG, NH, NJ, NM and NN. Dr Dieter Eigner (engineer and archaeologist, Vienna) contributed a set of surveyed drawings of the standing and ruined features of the Vitthala bazaar.

Fritz and Wright took photographs of archaeological remains documented on 1:400 map sheets, while Haugnes and associates similarly recorded structures that they drew.

Verghese (who again brought seven students for a one week programme of instruction) and Dallapiccola worked on a book on the sculpture at the site. They originally planned to illustrate this work with photographs, but it was difficult to achieve acceptable clarity and quality. They asked Martin to make of drawings using photographs. He began this work at the site, completing the assignment in Sydney following the season.

Bailey (now a Ph.D. candidate at the University of Pennsylvania) with the assistance of Wright collected, photographed and described several hundred Chinese porcelains to provide data for her dissertation. Staff of the KDAM kindly made available several dozen shards from their excavated collections. (Bailey later visited London to document porcelains held in our Project archive, but, sadly, was subsequently unable to continue her research.)

During the season, Fritz worked with Prof. Vinod Tewari (human geographer, Indian Institute of Management, Bangalore) in the development of geographical information system (GIS) data bases for the site. In 1994 and 1995, his student, Mohan V. Kumar, developed GIS data bases for features occurring on two map sheets. His master's paper at the Institute was based on this work.

Dr Helen Jessup (art historian, Washington, DC) visited the site together with the Australian ambassador.

During the following summer, Tobert with colleagues prepared the exhibition, *Sacred Lands, Devoted Lives: Hinduism and Daily Life in a south Indian village*, at the Horniman

Museum, London, based on her work at Aneondi. An illustrated booklet accompanied the exhibition (see *Other Monographs*: Tober 1994).

November 1994 to February 1995

The fifteenth season also lasted three months. Our team was large and members again came from India, Europe and the USA.

Our surveyors made fewer new maps in the period leading up to this season, and they were concentrated in the Sacred Centre; but sheets in the Royal Centre, Urban Core and Irrigated Valley were also prepared. Fritz with Linda Whitman verified maps in all four zones. They were assisted by archaeologists from India (including Aruni and Bhiladvala), Germany (Doris Koether), the UK (Wendy Jane Booth, David Cheshire, Tiffany Denny, Willy Kitchen, Darren Lankstead, Hanna Penn, James Gordon Snee, Jacqueline Stanswood and Martin E.S. Thornburn) and the USA (Ethan Cochrane, William Griffin as well as Whitman).

A lesser number of architects participated; they came from the UK (David Chanter, Mark Scott and Mark Webb) and the USA (Laura Boutwell). They drew a variety of structures in the Royal Centre, Urban Core and Sacred Centre. These included palaces in the first two zones, the base of a wooden temple on the Northeast Road, and the remains of an elite complex mostly destroyed in the construction of the High Power Reservoir near Kamalapura. In the Metropolitan Region, we drew the large aqueduct at Hanumanhalli and the Mallikarjuna temple complex at Malpannagudi.

Jayaram Poduval (architectural historian, M.S. University, Baroda) undertook to describe structures located on Map Squares NC, NG and NH as part of our inventory of the Sacred Centre. Eigner extended his map of the Vitthala bazaar to include the main temple complex and surrounding structures. He also surveyed a large palace complex on the north side of the North-east Valley in the Urban Core (see Dungee and Fritz this volume).

Gollings resumed photography of the site when he spent part of December with the team. Fritz and Whitman also continued to photograph archaeological features encountered while verifying 1:400 maps.

The World Archaeology Congress took place in New Delhi in December, and Fritz as well as Morrison and Sinopoli gave papers. Prof. Henry Wright (archaeologist, University of Michigan) visited the Project after the Congress and shared with us his considerable archaeological experience. Also in December, a number of foreign and local visitors, including Project alumni, assembled to celebrate Michell's 50th birthday. Notable among them were Götz Hagemüller (architectural conservator, Nepal) and Hugh O'Neil (architectural historian, University of Melbourne). At the end of the month, Verghese and a dozen Sophia College students joined us.

December 1995 to March 1996

The team of our sixteenth season was small but still geographically diverse (from India, Australia, Europe and the USA). Among the many friends who visited us this season, we note Srimati Urmila Devi (Wodeyar) and party from Bangalore.

The Bangalore survey team completed the mapping of the site that they had begun more than a decade previously. They re-surveyed one sheet in the Royal Centre; 25 maps (many only part-sheets) were made of the northern extremities of the Sacred Centre. Archaeological assistants supervised by Fritz and Joshua Wright verified all these sheets during the three-month season. They came from India (Bhiladvala) and the USA (Kierson Crume, Alexandra Mack and Wright).

Architects from Australia (Judith Ambler), Austria (Eigner), Germany (Andreas Strobl) and the UK (Alan Smith) drew a number of rock-cut foundations for structures and a rubble-walled complex in the Sacred Centre. Ambler also prepared axonometric drawings of selected structures showing how moulded blocks were assembled. Eigner checked and refined his 1:200 map of Vitthalapura. Strobl drew a series of divinities carved on a cluster of boulders in the Urban Core. Poduval continued descriptions of structures in the Sacred Centre for our inventory. We were also visited by Klaus Rotzer (architectural historian, France) who, together with Khandu Deokar (draftsman, Karla, Maharashtra), undertook to measure a

bastion in the western extension of the Urban Core fort wall.

In January, a small team of engineers from Messbildstelle GmbH, Potsdam, led by Dipl. Ing. Jurgen Renisch documented approximately 30 structures in order to demonstrate the applicability of photogrammetry to document historic structures in India. The team concentrated their efforts on the *gopuras* of the Virupaksha, Malyavanta Raghunatha and Pattabhirama temple complexes and the sanctuaries of the Anantashayana and Sarasvati temples. They presented a number of finished drawings to the Project the following summer.

Other visitors included Prof. Alan Entwistle (Hindi scholar, University of Washington), Antonio Martinelli (photographer, Paris) and Dr Jim Masselos (historian, University of Sydney).

In February, Michell and Fritz participated in a seminar on preserving India's cultural heritage at Pune organized by the American Institute of Indian Studies, New Delhi.

At the end of the season, Fritz participated in two documentary films made at the site. The first formed part of an eight-film series produced by *Marg* Magazine (Bombay). Shyam Benegal directed the Hampi module. The second film, which documented sites associated with the *Ramayana*, was produced by Sorab Irani (Bangalore) and featured interviews with Sunil Sethi (New Delhi).

December 1996 to January 1997

Our seventeenth season lasted only one month and the size of our team was small, consisting of Fritz, Michell, Dallapiccola, Verghese and Poduval. Our documentation aimed to complete work begun in previous seasons, or focused on narrow problems. Rotzer and Deokar continued their observations of fortifications. Dallapiccola stayed ten days at the site, while Verghese was present for a week with Sophia College students.

Fritz described and made a sketch plan of unexcavated palaces complexes visible on the surface near the Octagonal Bath (see Cope-Faulkner, Fritz and Gibson this volume). Michell and Poduval revised descriptions of

structures in the Sacred Centre (Map Squares NC, ND, NG, NH, NJ and NN). Rotzer and Deokar, with Fritz, visited Mudgal, a fortified city to the north of the site that passed several times between Vijayanagara and the Bahmanis.

Kotraiah again visited the camp and presented summaries from selected Kannada sources that he had prepared over the previous year. Fritz discussed with him a possible study of traditional place names in the region. However, this project was not further developed.

In August of 1997, our colleague Asim Krishna Das passed away. He bequeathed to us his deep love of Indian culture and important insights into past and present religious practice at Vijayanagara (see Das, this volume). Unfortunately, his work on the *Hemakutakhanda* was not completed.

February-March 1998

Our eighteenth season lasted one and a half months. The team consisted of Fritz, Michell, Dallapiccola and Verghese.

Fritz documented and photographed the architecture elements in each phase of the Great Platform, including recently exposed walls and footings at the top of the structure, and plaster floors and mouldings at the bottom. He also measured the dimensions of rooms, walls and footings in previously excavated palaces in the Royal Centre as well as an unexcavated complex in the North-east Valley.

Michell revised descriptions of structures in the Sacred Centre, and photographed and drew plans of seven shrines in the zone. Corresponding with Wagoner by email, he organized the contents for their forthcoming inventory of this zone.

Dallapiccola and Verghese checked the text for their forthcoming monograph on sculpture (see Monograph Series: Dallapiccola and Verghese 1998). Dallapiccola continued her work at the Great Platform. In June, she began to edit Kotraiah's summaries from Kannada sources for publication.

Tina Khote (film producer, Bombay) and Elbrun Kimmelman and Peter Stern (World Monuments Fund, New York) were among our distinguished visitors.

December 1998 to February 1999

Our nineteenth season lasted two and a half months. The team again consisted of Fritz, Michell and Dallapiccola. Michell made final checks of descriptions of structures in the Sacred Centre for the Inventory of this zone. Fritz continued to document the architectural constituents of the Great Platform including newly discovered masons' marks. These indicated successive layouts of the *mandapa* erected on top of the structure. Tandi Hufnagel (architect, USA) revised and expanded plan drawings of the platform, while Dallapiccola continued her documentation of the relief sculptures of the same monument.

Meanwhile, Kotraiah prepared a glossary for his publication on of Kannada sources.

Our visitors included Prof. Edmund Burke (historian, University of California, Santa Cruz), Simon Digby (art historian, Isle of Jersey), Carolyn Elliott (historian), James Holloway (art historian, Edinburgh), Alan Roberkn (Architect, London), Prof. Peter Stansky (historian, Stanford University), Ben Tindal (architect, Edinburgh), Marina Vaizey (art critic, London) and Prof. Tom Zeidiman (archaeologist, University of Illinois).

In January, the Vice-Chancellor of Kannada University presented Michell with the Nadooja Award in recognition of his contribution to the study of Karnataka monuments.

December 1999 to February 2000

Our twentieth season lasted two months. The team on this occasion was somewhat larger, consisting of Fritz, Michell, Dallapiccola, Verghese, Marsh and R. Kamalahasan (architect, Pondicherry). The effort of several team members shifted from fieldwork to preparation of various publications. However, Fritz continued to document the Great Platform. He also recorded pillar sockets and other architectural elements associated with the two sections of the bridge on the Tungabhadra River (NBx and NBs). Marsh enlarged an earlier study of the geomorphology the Vijayanagara site, examining evidence for quarrying and water control. He also documented the process of construction of an unfinished temple (NMd/

3). Kamalahasan revised the plan and elevations of phase IV of the Great Platform, while Dallapiccola checked her account of the relief sculptures on the same monument, as well as continuing her work on Kotraiah's translations. In addition to finalising the text of the Inventory of the Sacred Centre, Michell edited proofs for a volume of the *Encyclopaedia of Indian Temple Architecture*, which included chapters on the monuments at the site (see Other Monographs: Michell 2001).

Mack carried out an independent archaeological investigation of surface features at Vitthalapura for her Ph.D. (see Theses and Dissertations: Mack 2000, and Other Monographs: Mack 2000).

To celebrate two decades of work at Vijayanagara, Fritz's 60th birthday and the Millennium, we hosted a party at the end of December for friends, Project alumni and colleagues from India and abroad. A number of people who also visited us before and after this event included Daniel K. Browne (architectural historian, University of Wellington), Anthony Korner (publisher, New York), Helen Philon (art historian, Athens) and Prof. Thomas Temple Tuttle (musicologist, Cleveland State University).

Epilogue: 2000 to the Present

The pace of documentation at the site slowed considerably after the Millennium as our focus shifted from documentation to publication. However, limited documentation and checking of data for particular publications has continued. We have also advised on publications ranging from guide books to computer reconstructions of monuments on a CD-ROM. At the same time, a new team has undertaken to elaborate certain aspects of our previous documentation at the site. As well, we have become more involved in efforts to manage and preserve the cultural heritage of the Vijayanagara site. An important activity at this time was the preparation of *New Light on Hampi*, a publication that summed up 20 years of research at the site by the Project directors and team members (see Other Monographs: Fritz and Michell 2001).

December 2000 to February 2001

Our twenty-first season lasted ten weeks. The team included Fritz, Michell, Dallapiccola and Verghese. Fritz continued the documentation of the Great Platform (phase IV) while Dallapiccola checked the final text of her description of the reliefs.

Dallapiccola presented Kotraiah the edited manuscript of his Kannada sources, which she had completed during the previous summer with the editorial assistance of Janet McAlpin (London). By the end of January, Kotraiah completed translating two additional texts, one a sixteenth-century cookbook.

The photographer Clare Arni (Bangalore) stayed at the site for two weeks in January working on *New Light on Hampi*.

A small team directed by David Gimbel (archaeologist and Director of Archaeos Foundation, New York) visited the site in January in order to begin a new mapping programme in collaboration with Fritz. Our objective was to use sophisticated surveying equipment to make very detailed maps of areas of the site where surface remains are particularly dense. The areas chosen were the North Ridge (north of Enclosure XIV) and Noblemen's Quarter (Enclosure XXVI). The North Ridge has the remains of shrines, rubble-walled structures, rock-cut features and portable stone objects. Fritz introduced the Archaeos team to the types of features and objects in these parts of the site. Once the staff of the KDAM had supervised the clearing of brush, Fritz and an assistant outlined features to be surveyed in whitewash. The Archaeos team established a number of permanent survey data points, and tested their equipment and procedures by mapping an area in each of the North Ridge and Noblemen's Quarter. For the first time we used a digital still camera to document artefacts and landscape at Vijayanagara; a team member also made a digital video of the survey work.

A two-part seminar on Vernacular Architecture and Preservation of Cultural Heritage was held in Madras and Anegondi in January. Fritz, Michell and Tobert guided participants around Vijayanagara and Anegondi and gave talks on the management and conservation

of these sites. Tobert's study of Anegondi was a particular focus of the meeting (see Monograph Series: Tobert 2000).

Sinopoli visited the site to begin preparations for a new project near Anegondi (see below).

Winter Season, 2001-02

During this period, Fritz and Michell were mostly away from the site. In January, Michell attended a conference on historic preservation organized by INTACH in New Delhi. Both consulted with staff of VRRT Technologies, Bangalore, on the creation of computer-generated restorations of the monuments at Vijayanagara. Fritz spent a week with the VRRT team at the site, introduced them to the architectural record of the site. He also consulted with Gimbel and staff of the Archaeos team, which spent three weeks mapping the North Ridge and Noblemen's Quarter.

Dallapiccola visited the site for a week.

Winter Season, 2002-03

In early 2003, our Project ended its presence at Vijayanagara. Fritz visited the KDAM camp in Kamalapura for a week in January and also in March. He removed the equipment stored in the camp, passed on usable supplies to the team lead by Sinopoli, and distributed worn goods to local workers. He photographed several structures described by assistants a decade earlier, revising and expanding their reports. Fritz also photographed extensively the bridge on the Tungabhadra, expanding his observations of its construction, especially its foundations. In the process, he discovered several short Kannada inscriptions.

The Archaeos team led by (now) Dr Gimbel continued to map the North Ridge and the Noblemen's Quarter. They found short-term accommodation in Kamalapura.

Sinopoli's team took up excavation at an Early Historic site on a hill north of Anegondi. Based on discoveries of pre-Vijayanagara occupation of the Tungabhadra River basin during the VMS surveys of the region, this work initiated a new and exciting phase in archaeological research in the area.

Permission and Support from Indian Institutions

Since 1982, the Project has been affiliated with the KDAM. From 1980 to 1983, the ASI permitted Michell to work at Vijayanagara. The Government of India first permitted Fritz and Sinopoli to carry out research along with Michell at the beginning of 1983. In mid-1983, the Government gave Fritz and Michell and a small team permission to continue work for one season; this permission was renewed in 1984, 1985, early and late 1987, 1990, 1991, 1992, 1993, and 1994. In 1995, the Government of India kindly extended permission for three years. Permission was further extended for a three year project involving Gimbel and associates in 2001.

In 1981, Fritz proposed to the Government of Karnataka that cooperative research be undertaken between him (then representing the University of New Mexico) and his colleagues and the KDAM. The Government of Karnataka kindly agreed to the proposal and this arrangement is ongoing. This agreement permitted the scope of the Project gradually to be expanded. The KDAM extended its excavation of partly exposed structures while the VRP documented archaeological features on the surface of the site. Members of the Project drew up many of the excavated structures and documented earthenware ceramics and Chinese porcelains recovered by the Department. The Department kindly offered its camp near Kamalapura for the use of VRP and VMS teams and made available vehicles and drivers, cooks and guards, as well as equipment. The KDAM has published several monographs in its *Progress of Research* series, with articles by both Karnataka archaeologists and members of our teams.

The successive Directors of the KDAM have been extraordinarily helpful to our work and we gratefully acknowledge their encouragement. In chronological order: M.S. Nagaraja Rao, A. Sundara, Chiranjiv Singh, D.V. Devaraj, M.L. Shivashankara and K.R. Ramakrishna, KAS. As well, the officers in charge of arrangements at the KDAM camp have graciously made available all facilities: Balasubramanya, T.M. Manjunathaiah, C.S. Patil, H.T. Talwar and T.S. Gangadhara.

The ASI also kindly encouraged our research. In the early 1980s, team members helped to map features excavated in Enclosure V at scale 1:200. Their staff allowed our survey team to map features in Enclosures II, III, IV, and V where the ASI had recently cleared structures. The ASI also made available ceramics collected from a well in Enclosure IV to Sinopoli for description and analysis. Our work would not have been possible without permission from and active cooperation with officers of the ASI; successive Directors General in New Delhi; Superintending Archaeologists in Bangalore; Directors of the ASI Museum and site Conservation Assistants in Kamalapura; and even the many *chowkidars* posted at the different monuments at the site. In particular, we gratefully acknowledge B.K. Tharpar and Debala Mitra, the Directors General who first permitted Michell and Fritz to work at the site. We also express our gratitude to L.K. Srinivasan and K.P. Poonacha, Superintending Archaeologists in Bangalore, and G. Kamaraj and J. Ranganatha, Conservation Assistants at the site, who particularly encouraged our work.

The American Institute of Indian Studies (AIIS), New Delhi, provided essential institutional support in India. Beginning in the early 1980s, Dr Pradeep Mehendiratta, its Director, obtained permission and research visas from the Government of India. Its staff kindly administered research funds, organized places to stay in Delhi and transportation within the country, and even helped solve a minor medical crisis.

Funding

The research described here would not have been possible without the financial support of a number of institutions and individuals outside India. This support included grants to the Project directors and several team members.

Funding by Institutions

The Special Foreign Currency Fund of The Smithsonian Institution first supported Fritz's travel to India in 1980-81. This grant initiated an extraordinary, long-term programme of support the Smithsonian Institution. Rupee funds were administered in India by the AIIS

for transport to and within India, per diem expenses, supplies, wages for local assistants and fees for consultants (1981-82, 1983-84, 1986, 1990-91, 1991-94 and 1994-96, extended to 1997).

The National Endowment for the Humanities (NEH) provided considerable support over several grant periods (1982-83, 1984, 1985, 1986 and 1988-90) for salaries, fees, transportation, equipment and supplies essential for post-season preparation and analyses of data and the writing of publications.

The National Science Foundation (NSF) provided similar support to NEH, but for one grant period (1984-85). Other sources of support in the USA included the Asian Cultural Council, New York, which provided support for acquisition and distribution of publications in India (1984), for a travelling exhibition of photographs and drawings (1985), and for travel of assistants to India (1986); the Getty Grant Program, Los Angeles, to Aperture Foundation, New York, to support the publication of *City of Victory* (see Other Monographs: Gollings, Fritz and Michell 1991); and the Readers Digest Foundation, New York, which provided matching funds for NEH grants. The University of New Mexico, Albuquerque, the Project Directors and other team members made in-kind contributions of wages, supplies and equipment for NEH grants.

In Britain we received grants from The British Academy, London, for preparation of data (1981-82, 1987, 1988 and 1997); The Luigi and Laura Dallapiccola Foundation, Edinburgh, for translations (1998) and for travel by Michell (1999), The Society for South Asian Studies, London, for preparation of field data (1986), for travel by student assistants to India (provided directly to them in 1990-91, 1993-94, 1994-95 and 1995-96), and for travel of Michell (1999-2000); and INTACH UK Trust, London, which contributed towards expenses of preparing materials for publication (2000).

In 1983, the Department of Architecture and Building, University of Melbourne, provided a drawing studio and students, as well as funds to publish our *Preliminary Report* (see Other Monographs: Fritz, Michell and Nagaraja Rao 1984).

Funding by Individuals

Private donors have made substantial contributions to our project. We acknowledge, in particular, Eleanor Schwartz (New York), who stimulated Michell's interest in documenting the site and who has been generous in supporting our ongoing efforts. She and Cathy Curran (New York), Mrs Sydney Gamble (New York), Louise Harper (Washington, DC) and Cecilia Nadler (New York) provided matching funds for NEH grants.

More recently, a number of individuals in Australia, UK, India, Switzerland and the USA have given generously to support our ongoing publication programme. We acknowledge these individuals at the beginning of this volume.

Notes

1. Together with her husband, Dr Pierre-Sylvain Filliozat, Vasundhara Filliozat had been studying inscriptions and temple architecture at the site since the early 1970s (P.-S. Filliozat 1985, P.-S. and V. Filliozat 1985 and 1988, and V. Filliozat 1977, 1978, 1984 and 1985).
2. This was the second of a series of four symposia on Indological topics organized at Heidelberg by Dallapiccola.
3. The Gollings negatives from this season were subsequently lost by a Melbourne processing company.
4. The KDAM prepared the camp for delegates to a seminar on conservation, organized by Dr Nagaraja Rao, held the previous December.

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- (architect, India, 1983); Shahida Ansari (archaeologist, India, 1993-94); George Arnold (architect, USA, 1991-92); H.Y. Arun (architect, India, 1985); Dr S.K. Aruni (archaeologist, India, 1992-93, etc.); Daniel Asquith (archaeologist, UK, 1988).
- Ramesh Babu (architect, India, 1984); H.N. Ramesh Babu (architect, India, 1985); Janice Bailey-Goldschmidt (archaeologist, USA, 1992-94); Basavaraja G. (archaeological assistant, India, 1998-2003); Subhas Basu (architect, India, 1983); Peter Baxendale (archaeologist, UK, 1990-91); Sylvia Berti (archaeologist, Switzerland, 1993, 1994); Roger Beeston (architect, Australia, 1981, 1983); Janet Beeston (architect, Australia, 1984-85); Helen Bernard (architect, Australia, 1984-85); Raimonda Buitoni (photographer, London, 1981); Khandap Bhatt (architect, India, 1982); Samantha Bhiladvala (archaeologist, India, 1993-96); Gurleen Bindra (archaeologist, India, 1992-93); Richard Blurton (archaeologist, UK, 1983, 1983-84, 1984-85, 1986); Mark Bobrowicz (architect, USA, 1981); Mike Bohn (architect, USA, 1987); Wendy Jane Booth (archaeologist, UK, 1994-95); Laura Boutwell (architect, USA, 1994-95); Sandra Bowkett (architect, Australia, 1988); Joanna M. Boyle (architect, UK, 1994); Suzanne Bristow (architect, Australia, 1984); Fabia Brunnori (assistant, London, 1981); Anthony Buckingham (archaeologist, Australia, 1985).
- Oscar Carlberg (archaeologist, Sweden, 1992-93); Mark Cassell (archaeologist, USA, 1986); Sharmi Chakrabarty (architect, India, 1993-94); David Chanter (architect, UK, 1984-85, 1993-94, 1994-95); Tan Huan Cheng (architect, Australia, 1980); David Cheshire (archaeologist, UK, 1993-94, 1994-95); Subhas R. Chinhole (archaeologist, India, 1992); Zoe Clark (archaeologist, UK, 1993-94); Ethan Cochrane (archaeologist, USA, 1994-95); Patrick Collins (architect, Australia, 1983); Robert Colvin (photographer, Australia, 1985); David Conley (architect, Australia, 1985); Paul Cope-Faulkner (archaeologist, supervisor, UK, 1990-91, 1991-92, 1992-93); Harry Cripps (archaeologist, Australia, 1985); Peter Crockett (architect, 1987); Kierson Crume (archaeologist, USA, 1995-96).
- Daniel D'Attilio (archaeologist, USA, 1992-

Appendix: Alphabetical List of Volunteer Assistants Including Students and Young Professionals

Alain Adam (architectural assistant, UK, 1981); Emma Adams (architect, UK, 1984); Alastair "Alex" Adamson (architect, Australia, 1984-85); Vasanti Agsar (archaeologist, India, 1992); Kerry Allen (architect, Australia, 1994); Judith Ambler (architect, Australia, 1995-96); Sanjiv Anand

93); Paul D'Onofrio (architect, USA, 1992-93); Dustan J.M. D'Silva (architect, India, 1983); Shivkumari Dahiwelkar (archaeologist, India, 1992-93); Dennis Daniel (architect, Australia, 1994); Nripen Chandra Das (archaeologist, India, 1993-94); Suchi Dayal (archaeologist, India, 1991-92); Marnix De Man (architect, Neatherlands, 1988); Tiffany Denny (archaeologist, UK, 1994-95); Simon Denton (assistant, Australia, 1987); Khandu Deokar (draftsman, India, 1995, 1996, 1997); Sharanabasappa H. Desai (architect, India, 1983); Sunil K. Dhir (architect, India, 1983); Radhika Doshi (architect, India, 1981); Antonia Douthwaite (archaeologist, UK, 1991-92); Simon Dove (architect, UK, 1980); Treacey Dowd (architect, Australia, 1984); Arthur Duff (architect, Ireland, 1980); Paul R. Dungey (archaeologist, UK, 1992).

Simon Everson (photographer, UK, 1986); Mark Eyler (architect, USA, 1987).

Jenny Faddy (architect, Australia, 1985); Ross Feller (architect, Australia, 1980); Jubal Fernandes (archaeologist, India, 1992-93); Jason Fisher (Art Historian, USA, 1992); Simon Fleming (architect, UK, 1988); Andrew "Dee" Foster (photographer, Australia, 1987); Judith Foster (architect, Australia, 1984); Ian Fraser (architect, UK, 1988); David Freed (architect, USA, 1991-92).

Kristina Galloway (assistant, Australia, 1987); Nikhil Gandhi (architect, India, 1983); Simon Gedeye (architect, UK, 1993-94); David Gibson (archaeologist, UK, 1991-92); Margareta Gilgen (architect, Switzerland, 1988); Jonathan A.J. Godfrey (archaeologist, UK, 1993-94); Ian Goodfellow (architect, UK, 1988); Martin Goodfellow (archaeologist, UK, 1990-91); Arun Kumar Gopal (architect, India, 1981); William Griffin (archaeologist, USA, 1994-95); Lynette Gurr (architect, Australia, 1988); Peter Gyulavary (architect, Australia, 1980; died, World Trade Center, 11 September 2001); Dr John Guy (art historian, UK, 1981).

Erik Haugsnes (architect, supervisor, USA, 1992-93, 1993-94); Liz Hawkins (architect, UK, 1987); Pappori Hazarika (archaeologist, India, 1993-94); Jonathan Hellin (architect, UK, 1984); Candy Herrin (architect, UK, 1984); Vishwas Hittalmani (architect, India, 1981); Sudarshan Holla (architect, India, late 1980s);

Jane Homewood (architect, Australia, 1983-84); Libby Howard (architect, Australia, 1983-84); Tandi Hufnagel (architect, USA, 1998-99); Baz Hurrell (architect, 1987).

Roxana Irani (archaeologist, India, 1988).

V. Jagan (architect, India, 1985); Shimul Javeri (architect, India, 1983); Rachel James (architect, UK, 1992-93); Sally Johnson (architect, Australia, 1980); Maria Jones (architect, UK, 1993-94); Neela Joshi (architect, India, 1981); Laura L. Junker (archaeologist, USA, 1983-84).

Rahul Kadri (architect, India, 1983); Anuragand Kailashnath (architect, India, early 1980s); R. Kamalahasan (architect, India, 1999-2000, 2001); Deepak Kotecha (architect, India, 1981); Alok Kumar Kanungo (archaeologist, India, 1993-94); Timothy Kaping (archaeologist, India, 1992); Bilal R. Khrisat (geologist, Jordan, 1993-94); Poornima Kirloskar (archaeologist, India, 1992-93); Doris Koether (archaeologist, Germany, 1994-95); Mukesh G. Kotak (architect, India, 1984); S. Bharath Kumar (architect, India, 1980s); Manoj Kumar (architect, India, 1985); I.M. Naveen Kumar (architect, India, 1983); C. Santosh Kumar (architect, India, 1983, 1985); Achar Kumaraswami (architect, India, 1980s).

Caz Larcombe (architect, Australia, 1984); Kok Liang Lam (architect, Malaysia, 1980s); Darren Lankstead (archaeologist, UK, 1993-94, 1994-95); Lucy Lavers (architect, UK, 1987); Marina Lewis (architect, Australia, 1983); Prof. R. Barry Lewis (archaeologist, USA, 1993-94); Peter Lovell (architect, Australia, 1981, 1984).

Alexandra Mack (archaeologist, USA, 1995-96); Rachana Malaviya (archaeologist, India, 1992); Tim Martin (architect, Australia, 1987, 1993-94); Wolfgang Maschek (Sanskritist, Germany and Australia, 1980-81, 1988); Jyotsana Maurya (archaeologist, India, 1992); Simon McCudden (architect, UK, 1987); Ian McDonald (architect, UK, 1992); Karry McGrath (architect, Australia, 1985); Donna McPhee (architect, Australia, 1984); Bernard K. Means (archaeologist, 1988, 1991, USA, primarily with VMS); Heather M.-L. Miller (archaeologist, USA, 1991); Jitu Misra (archaeologist, India, 1995); Rhea Mitra (archaeologist, India, 1993); Jenny More (architect, Australia, 1987); Kathleen D.

Morrison (archaeologist, USA, 1984; From 1988 with VMS team); William "Billy" Muir (photographer, UK, 1988); Khai Yip Mun (architect, Malaysia, 1980s); B.K. Muralindhara (architect, India, 1983).

Sonali S. Naik (archaeologist, India, 1991-92); G. Shankar Narayan (architect, 1980s); Christopher Noon (artist, UK, 1995).

Christine O'Para-Wicho (architect, Germany, 1984); Frank Occhipinti (archaeologist, USA, 1991); Charles Orton (architect, USA, 1991); Meredith Osborn (architect, Australia, 1985).

Swati Pande (archaeologist, India, 1993); Savita Pandey (archaeologist, India, 1992); Chris Pardee (architect, UK, 1981); Meera Parthasarathy (architect, India, 1983); Yamini Patil (architect, India, 1981); Rajasekar Patil (architect, India, 1980s); Hanna Penn (archaeologist, UK, 1994-95); Katie Perrin (architect, UK, 1993); Edward Pilkington (architectural assistant, UK, 1981); Sue Phillips (architect, UK, 1988); Tracey Pinnow (architect, Australia, 1983); Sakina Pittalwala (archaeologist, India, 1987); Nick C. Powell (archaeologist, UK, 1993-94); V. Satya Prakash (architect, India, 1983); K. Prakash (civil engineer, 1983); Sugandha Purandare (archaeologist, India, 1980, 1981, 1982, 1983, 1983-84, 1984-85); Eleanor Purcell (architect, Australia, 1984).

James Quoyle (architect, Australia, 1988)

Teresa Raczek (archaeologist, USA, 1992-93); Alison Rahn (architect, Australia, 1984); Deepak Rajani (architect, India, 1988); Prakash Rao (architect, India, 1983); R. Ravishankar (architect, India, 1983); Ashich Rege (architect, India, 1983); John-Henry Rice (architectural historian, USA, 1993); Rajesh Rishi (architect, India, 1983); Tony Romming (architect, USA, 1991); Ken Rorrison (architect, UK, 1988); Susan Ross (architect, Australia, 1983).

Deepak Anand S. (architect, 1984); Sunil Saini (architect, India, 1983); Pru Sanderson (architect, 1981, 1983); V. Sandhya (architect, India, 1987); Andrew Salmon (architect, Australia, 1984); Margo Sawyer (artist, USA, 1983); M.J. Mark Scott (architect, UK, 1992-1993, 1993-94, 1994-95); Stephen Selkirk (architect, UK, 1991); Viraj Shah (archaeologist, India, 1993); Snehal Shah (architect, India, 1980); R. Ravi Shankar (architect, India, 1985);

Vinod Kumar Shantilal (architect, 1987); G.N. Sharath Raj (architect, India, 1983); Sukanya Sharma (archaeologist, India, 1993-94); Asiya Shervani (archaeologist, India, 1992-93); Bharathi Shetti (archaeologist, India, 1988); Nagaraja Shetty (archaeological assistant, India, 2001); Peter Shields (architect, Australia, 1985; died in a road accident 1986); Shankar Shindhe (archaeologist, India, 1991); Suchitra V. Sholapurkar (architect, India, 1982, 1984); Carla Sinopoli (archaeologist, USA, 1983, 1983-84, 1986; from 1988 with VMS team); Alan F. Smith (architect and archaeologist, UK, 1995-96); T. Scott Smith (Astronomer, 1982); James Gordon Snee (archaeologist, UK, 1994); Nicholas Soloman (architect, Australia, 1984); Meghala Soman (architect, India, 1985); N. Srinivasan (architect, India, 1980s); Suchitra Srinivasan (architect, India, 1993); Jacqueline Stanswood (archaeologist, UK, 1994-95); Andreas Strobl (illustrator, Germany, 1995); Ravi K. Subramanian (architect, India, 1984, 1986); Deepak Suratkal (architect, India, 1988); H.K. Suresh (architect, India, 1983); Anna Sutherill (administrative assistant, UK, 1984-85); Mike Sutherill (archaeologist, UK, 1983-84, 1984-85).

Manjiru Telang (architect, India, 1983); Alison Anne Telfer (archaeologist, UK, 1993-94); Nalini Thakur (architect, India, 1980); Philip Thalys (architect, Australia, 1984); Louise Thom (architect, Australia, 1985); Martin E.S. Thronburn (archaeologist, UK, 1994-95); Robert Lon Trenery (architect, Australia, 1983).

H.R. Umesh (architect, India, 1983).

Ravi Valmiki (archaeological assistant, India, 1998-2003); C.K. Vijay Kumar (architect, India, 1983); Radhika Viswanathan (architect, India, 1985).

Mark Edward Webb (architect, supervisor, UK, 1991-92, 1992-93, 1994-95); Jason Weil (architect, USA, 1987); Vaishali Welankar (archaeologist, India, 1993); Claire Weldon (architect, USA, 1993); Peter White (photographer, Australia, 1981, 1983); Linda Gayle Whitman (archaeologist, supervisor 1992-93, 1994-95); Joe Whyte (architect, UK, 1991); Alison Rowe Wiesenfeld (architect, Australia, 1980, 1981); Ada Wilson (architect, UK, 1981, 1982); Helen Wilson (architect, Australia,

John M. Fritz

1984); Vidyadhar S. Wodeyar (architect, India, 1981); Andrew Wood (architect, Australia, 1983); Joshua St. Clair Wright (archaeologist, supervisor, USA, 1992, 1993-94, 1995-96); Mo Wright (architect, UK, 1988); Lou Ann Wurst (archaeologist, USA, 1986).

Staff

N.K. Chandrashekar (driver); V. Karthikeyan (surveyor, 1990-91); M. Muni (surveyor, 1980s, 1990s); R. Paramesh (surveyor, 1980s); U.S. Shrinivas (driver); K. Veeresh (surveyor, 1980s); S.K. Venkai (surveyor, 1980s).



Plate 1. Team members in 1987.