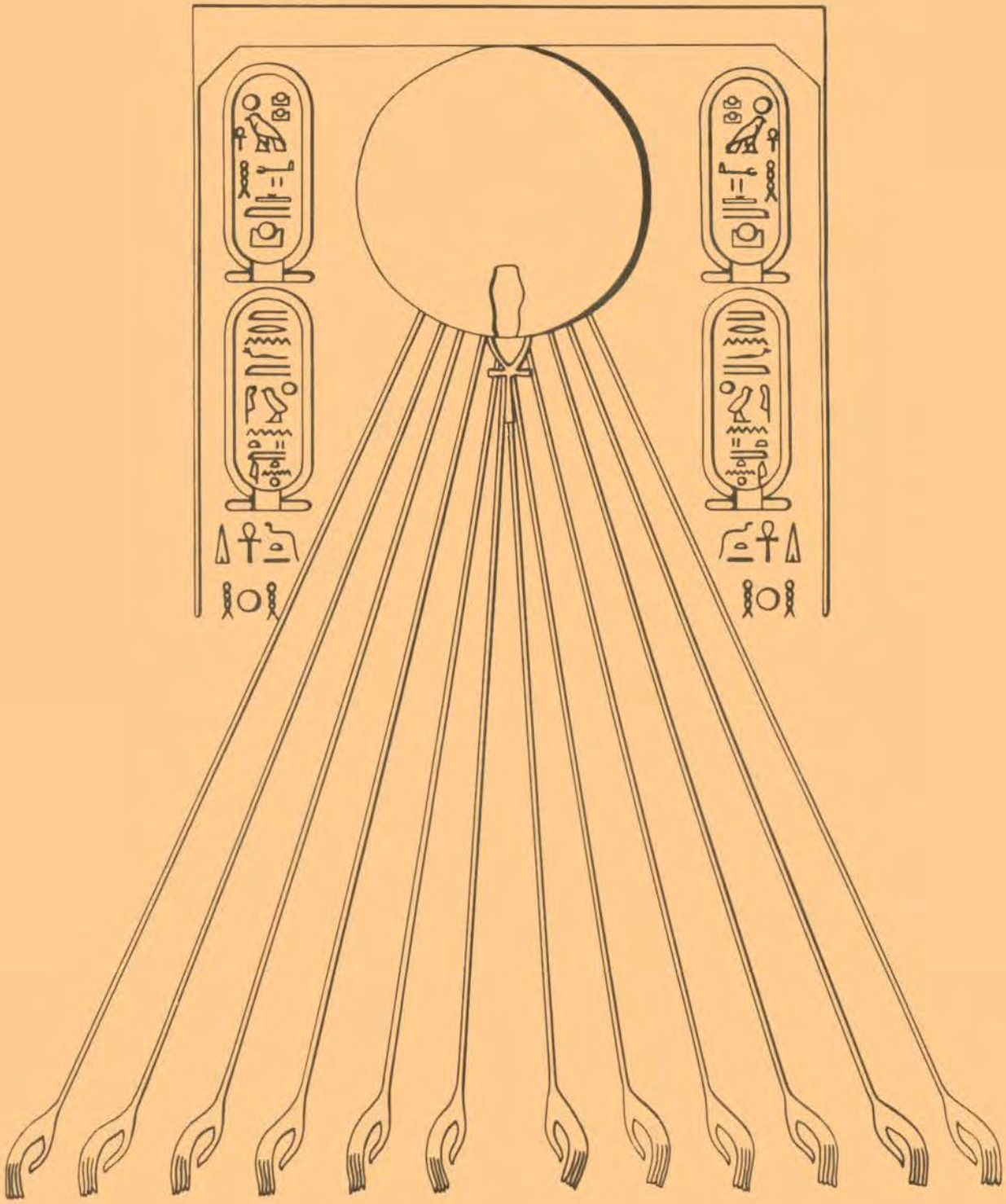

AMARNA REPORTS V

BARRY J. KEMP

EGYPT EXPLORATION SOCIETY

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The Egyptian city of (Tell) el-Amarna was built by King Akhenaten around 1350 B.C. as a new capital and as the showpiece for his new cult of the life-giving powers of the sun, the Aten. Following his death the city was rapidly deserted, after an occupation of between about fifteen to twenty years. This short-lived history makes the site immensely important for archaeological studies. In 1979 the Egypt Exploration Society resumed its programme of excavation and survey at Amarna, interrupted since 1936. The current excavations have been concentrated at an isolated settlement in the desert behind the main city, the Workmen's Village. At the same time a project of archaeological mapping for the whole city has been undertaken. This is the fifth volume of interim reports on excavations and survey, and on various related research projects. For the first time the fieldwork is wholly within the main city and comprises three separate elements: excavation in entirely new sectors of the principal residential area, continuation of the ceramic survey of Amarna started last year, and re-examination of one of the royal buildings in the Central City, the smaller Aten temple ("The Mansion of the Aten"). The reports also cover a new departure in the range of work undertaken: experiments on ancient pottery manufacture and the grinding of cereal grain and baking of bread.

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AMARNA REPORTS V

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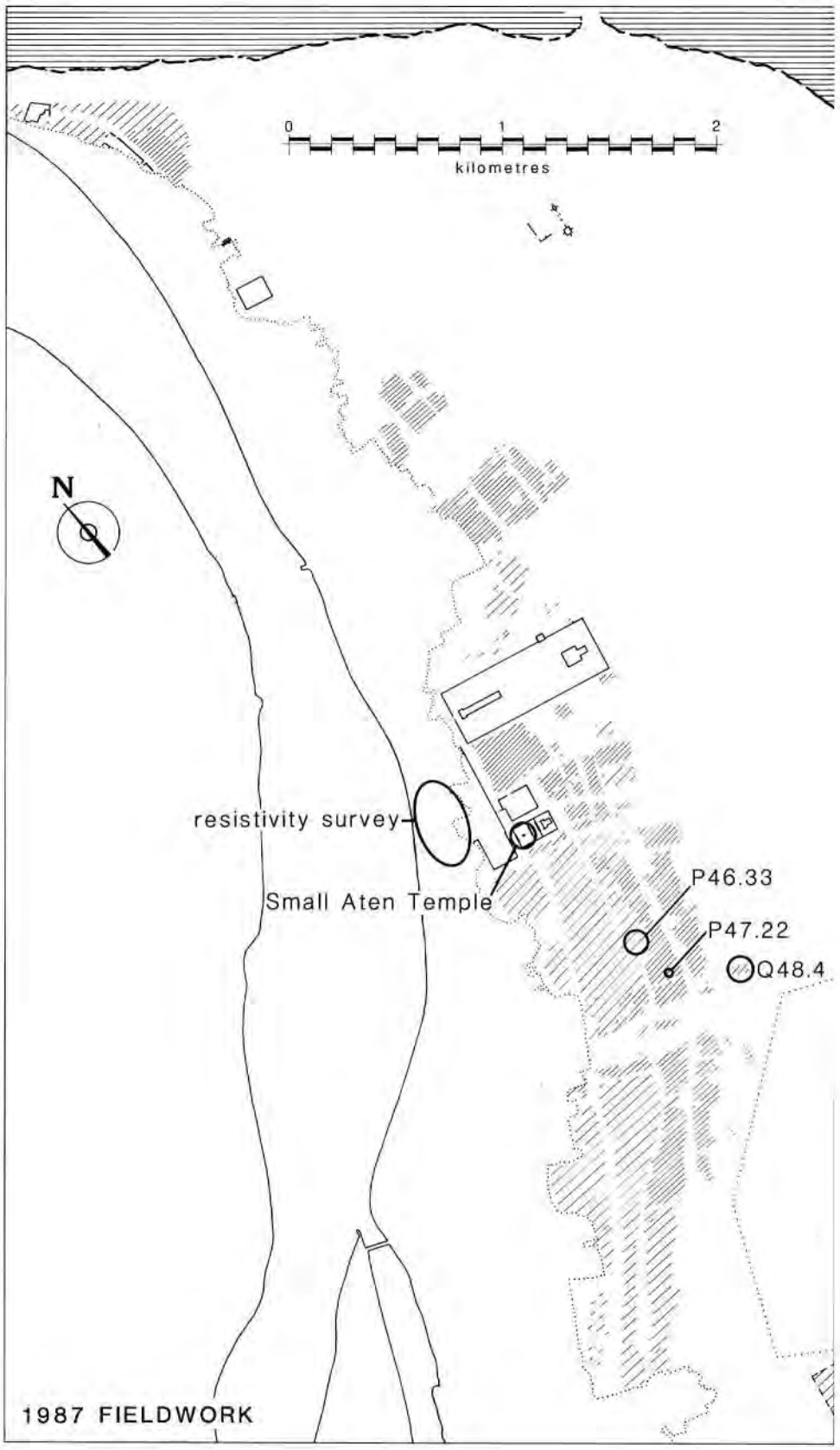

Figure 0.1. Map of Amarna, showing fieldwork locations for 1987.

PREFACE

THE 1987 season represents an important milestone in the expedition's progress since the whole of the fieldwork was, for the first time, focused within the Main City. This was the intention from the start of the Society's resumed activities at Amarna; it has simply taken longer to realise than was expected. The Workmen's Village was chosen for a beginning in 1979 on the grounds that it offered the chance of doing a useful piece of work which would also enable the expedition to build up a rhythm and style of excavation, recording and study in a very restricted and isolated area, easy to control. In the event the site proved to be richer and more complex than had been anticipated, and instead of the three or so seasons which were envisaged no less than eight were required to bring the work to the point where it could be argued that a satisfactory record had been made.

As was intended, the transfer of the expedition to the Main City now opens up prospects of field research more broadly based than has hitherto been possible. The intention is to retain an excavation of the scale and style developed at the Workmen's Village but also to embark on projects which bring large areas of Amarna under the scrutiny of modern archaeological research and to develop a programme for re-examining and to an extent rehabilitating key buildings, particularly those within the Central City. The 1987 season saw the initiation of all three. Because of the unique single-period character and the accessibility of huge tracts of the city, both excavated and unexcavated, a co-ordinated approach to the whole site is essential if its unique archaeological potential is to be properly exploited.

The choice of excavation area reflected two considerations which happily coincided. The principal one was the desirability of obtaining a fair cross-section of the archaeology of the city, and to accomplish this a broad strip has been selected which runs east–west from the edge of the old German-British excavations in squares P46 and Q46 to the cultivation. It takes in undisturbed house mounds, a large area of disturbed but not scientifically excavated housing, and what are probably government buildings on both sides of the modern road, some of them of substantial size. It is neither feasible nor really necessary to consider total clearance of such a huge area (the strip measures about 250 by 500 m). The approach has to be a mixture of judiciously chosen areas for thorough excavation and careful surface survey. The latter, once begun, quickly revealed an important factor already encountered at the Workmen's Village: if one wants to know what range of material was discarded by the occupants of houses, the answer lies as much in rubbish heaps well outside the houses as in debris left behind on floors. This simple fact reduces the analytical value of much of the artefactual record from the old German-British excavations.

The second consideration was created by last year's discovery of the route by which the Workmen's Village was supplied with water (and perhaps other things) from the Main City. As reported in *AR* IV: Chapter 9, the route linked the Village to surface signs of a large ancient well and associated building on the northern edge of the main wadi which cuts through the city. Their location is close to the sample strip across the Main City already chosen, and it was therefore easy to combine an investigation of these elements, which link the Village to the city, with a start on what is intended to be a major programme of research within the residential heart of the city. The excavation of the site adjacent to the well uncovered part of a building containing a pottery factory. This is a most welcome discovery which has already clarified several significant points. Chapters 1 to 4 describe the material found in this excavation.

Amarna is also of interest to people whose prime concern is not with settlement archaeology but lies either with the history and religion of the Amarna Period or with Amarna as a key example in the general history of urbanism and city layout. The mapping of the city reported in previous volumes was intended to lay the foundation for a broader approach, whilst in 1986 a token start was made at looking again at some of the major buildings, with notes on features at the site of the Sanctuary of the Great Aten Temple (*AR* IV: Chapter 8). In 1987 it proved possible to take a much more substantial step in putting under fresh scrutiny parts of the city of particular interest to a wider audience. The experience at the Workmen's Village of re-excavating buildings dug in the 1920s had been a rewarding one. Damage to buildings which had steadily sanded up after their first excavation was often much less than anticipated, and a second and more leisurely examination frequently revealed details which had been missed the first time round and sometimes exposed patches of significant undisturbed debris. Encouraged by this experience we decided to do the same with one of the major buildings in the Central City cleared by Pendlebury in the 1930s. This was the smaller of the two Aten temples, the *Ḥwt-ỉtn* ("Mansion of

the Aten") which still contains some of the most substantial mud brickwork at Amarna. The initial brief to the architect in charge of the project, Michael Mallinson, was to prepare a fresh and more detailed plan and sets of elevations of the whole building. This could only be achieved by exposing the corners of walls and clearing areas of sand which had accumulated since 1931, the date of the first excavation. Within a few days of starting the wealth of new detail was such that the programme had to be scaled down for 1987 to become a re-examination only of the main gateway and an area immediately behind. The detail is not only architectural. It includes a stratigraphy which for the first time enables a history of building-change to be established. The Lavers/Pendlebury plan turns out to be a composite of features not all of which were standing at the same time. Chapter 6 is an account of this work, which it is intended to continue. A further contribution to understanding the layout of the Central City is reported in Chapter 7, on a resistivity survey by Ian Mathieson of the cultivated ground between the modern river bank and the Great Palace.

As has become commonplace in modern archaeology, more of the expedition personnel were engaged on recording and research within the expedition house than were involved in the fieldwork proper. Partly this is accounted for by study of Workmen's Village material needed for a final publication. For the first time, for example, the substantial collection of fragments of matting and basketry was examined (Chapter 9). But a new direction of research at the house is also reported in Chapters 11 and 12, i.e. experimental archaeology. The two projects pursued were complementary and arose from the fact that evidence for cereal preparation and the baking of bread is well represented at Amarna, both at the Workmen's Village and in the Main City, and also involves the manufacture of pottery containers. Observation of excavated data, ancient pictures and models, and ethnographic descriptions do not together completely account for the ancient processes. In the end some points can be clarified only by trying to replicate the processes experimentally. For this season the construction of ovens and a quern emplacement were necessary, and this was successfully done in an abandoned annexe to the expedition house. It is hoped to develop this line of research in the future.

The 1987 fieldwork was intended to set the direction of work for some time to come, for only by a methodical approach spread over many seasons can a large site be sensibly comprehended. Before the season ended, however, the possibility of a major change had already intruded. Most of Amarna is safely within the protection of the Egyptian Antiquities Organization, despite the existence of large desert reclamation projects both completed and desired. The most vulnerable part has turned out to be Kom el-Nana, now surrounded on three sides by the large tract of reclaimed land behind the village of el-Amariya. During the course of the season a threat arose not to Kom el-Nana directly, but to a stretch of empty desert which the EAO had wisely staked out around the limits of the ancient site. Now that Kom el-Nana is, as it were, within the sights of local farmers, and will, in any case, be exposed to the increasing passage of agricultural traffic and percolation of ground water from the newly irrigated lands, it must be considered a threatened site.

The preparation of this volume began in the summer of 1987, but circumstances prolonged it so that now, at the time of completion, the 1988 season has also taken place. Kom el-Nana has, indeed, replaced for the time being the sample area of the Main City as the principal focus of excavation, although the Small Aten Temple work has not been affected, and, indeed, advantage has been taken of the delay in publication to add certain of the 1988 results to the record of the 1987 season contained in Chapter 6. At the time of going to press the 1989 season is close, and the intention is, therefore, to include in *Amarna Reports* VI the results of both the 1988 and 1989 seasons, the Kom el-Nana excavations featuring large. The change of direction has had another effect on the publication plans, too. It was originally intended to include within this volume the usual preliminary report on the trial excavation in the Main City and survey of the surrounding area. However, since this work has had to be suspended for the time being, and yet at the same time forms a neat sample from an entirely new area, it has been decided to prepare a more complete report, covering artefacts and pottery as well as architecture. It is hoped that this approach towards a final report can appear in *Amarna Reports* VI.

The form of this volume follows the scheme of previous ones, with three levels of contribution. Some chapters were independently written by the persons whose names they bear. The field reports, however, were compiled by Kemp and Christopher Kirby but on the basis of the field records made by the team members whose names appear as sub-headings in the relevant chapters. The full staff list for 1987 runs as follows: Ann Bomann, Angela Tooley, Christopher

Kirby and Ahmed Galal (site supervisors), Michael Mallinson (architect for Small Aten Temple), Ian Mathieson (resistivity survey), Andrew Boyce (artist), Pamela Rose and Dr Paul Nicholson (pottery, including the ceramic survey), Dr Robert Miller (ancient water supply and flints), Ann Cornwell (organics registration and magazine inventory), Fran Weatherhead (painted wall plaster), Delwen Samuel (botany), Dr M.A. Leahy (hieratic labels), Maire Brison (registrar), Willemina Wendrich (basketry and matting), and Gillian Vogelsang-Eastwood (textiles). The Egyptian Antiquities Organization was conscientiously represented by Ahmed Galal, who added to his rôle of Inspector that of site supervisor and greatly facilitated all aspects of the expedition's work. A continuing debt of gratitude is owed to the members of the Permanent Committee of the Egyptian Antiquities Organization, to Dr Ahmed Kadri and Dr Ali el-Khouli in Cairo, and to their colleagues in Minia Province – Mahmoud Hamza, Mohammed Abd el-Aziz Awad and Adel Hassan – for again permitting the expedition's work to continue at Amarna and for assisting the expedition to function smoothly and efficiently.

The expedition has greatly benefited from the interest shown and practical support given by members of the British community in Cairo, and in particular The British Council, in the persons of Brian Vale, Gordon Tindale, Peter Mackenzie Smith and Patrick Early, His Excellency the British Ambassador and Mrs Donatella Adams, and Amanda and Michael Pike of the Hongkong Egyptian Bank. George R. Brown once more provided generous support for the expedition and survey. Mr Stanley Hattie most kindly made a donation for equipment, Mr Edward Henderson one for the expedition house, and Mr Alfred Baxendale on behalf of Cementone-Beaver Ltd supplied the expedition with a large consignment of anti-termite chemicals. Again our substantial surveying requirements were enormously aided by the loan of an electronic theodolite from Ian Mathieson. The work of Pamela Rose and Delwen Samuel was supported by grants from the British Academy, and that of Dr Paul Nicholson by a grant from the Leverhulme Trust.

For the setting up of the printed text of this volume and for use of analytical programs the expedition is indebted to the facilities provided by the University of Cambridge Computing Service.

TECHNICAL NOTES

The system of excavation and recording developed at the Workmen's Village was transferred to the Main City, and proved fully adaptable with one difference. This concerns the excavation grids. The whole city is notionally covered by the 200-m grid established by the German expedition of 1911. This, however, is too large to be a practical guide to excavation, not least because on the ground it is difficult to fix with precision. The decision has been made, therefore, to continue to excavate within five-m grids of local application, these grids themselves being tied to the overall Amarna Survey and thus to the older excavations. Two separate grids were laid out for this year, Grid 1 and Grid 2, to cover respectively the well/pottery factory and the sample housing area. In each grid the squares are identified by prefixes consisting of a letter, representing the west–to–east axis, and a number for the south–to–north axis. The squares not only provide a framework of reference, but have also been used throughout as the basic frame for excavation. Sections have been drawn along many grid lines, but no baulks retained, since the goal is area clearance. For the sake of consistency a grid was also created for the Small Aten Temple work, becoming Grid 3.

As a second order of reference, for complete houses or buildings the old system of numbering houses by the 200-m grid will be continued. Only two were added this year: Q48.4 for the well/pottery factory and P46.33. These numbers are the equivalents of the building numbers used at the Workmen's Village, and, as there, area numbers have been introduced, post-excavation, for ease of reference to individual rooms and spaces which often appear in a somewhat fragmented manner during the course of excavation. The basic recording system used is a direct continuation of that employed at the Workmen's Village, a single open series of numbers applied to all kinds of debris, not only layers, but walls, cuts, fills, and so on. These are called "units". On the plans unit numbers appear in rectangular boxes, and in the text are written in square brackets, thus [3087].

In the excavation photographs, the wooden scale that appears is 1 m long.

BIBLIOGRAPHY AND REFERENCES

The references for Chapters 1 to 7, which report on the 1987 fieldwork, will be found at the end of Chapter 7. References for the subsequent chapters, written by individual authors, will be found at the end of each of their chapters.

The following abbreviations have been used throughout:

AASOR: Annual of the American Schools of Oriental Research. New Haven.
AR: Amarna Reports. London.
ASAE: Annales du Service des Antiquités de l'Egypte. Cairo.
BIFAO: Bulletin de l'Institut français d'Archéologie orientale. Cairo.
CdE: Chronique d'Egypte. Brussels.
COA: The City of Akhenaten. London.
GM: Göttinger Miszellen. Göttingen.
JEA: Journal of Egyptian Archaeology. London.
JNES: Journal of Near Eastern Studies. Chicago.
Lexikon: W. Helck and E. Otto (later W. Helck and W. Westendorf), *Lexikon der Ägyptologie,* Band I-VI. Wiesbaden 1975-86.
MDAIK: Mitteilungen des Deutschen archäologischen Instituts, Abteilung Kairo. Cairo.
MDOG: Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin. Berlin.
RT: The Rock Tombs of El Amarna. London.
SSEA Journal: Society for the Study of Egyptian Antiquities, Journal. Toronto.
ZÄS: Zeitschrift für ägyptischen Sprache und Altertumskunde. Berlin.