JOHN DESMOND CLARK *E. J. Lofgren*

John Desmond Clark
1916–2002

FOR SIX DECADES, Professor John Desmond Clark played a leading role in archaeological research in sub-Saharan Africa. In the words of his former teacher, Grahame Clark, he did 'more than any other man to pull together the prehistory of the continent of Africa from the beginnings of human culture up to . . . recent times'. He was born in London on 10 April 1916, but the family moved to Turville in rural Buckinghamshire shortly afterwards. In later years Clark (1986) recalled how walks in the Chilterns with his father initiated his lifelong interest in the history and archaeology of the countryside, which was further nurtured by his teachers at Monkton Combe. It was at that school that his enthusiasm first turned towards Africa, with a short-lived interest in Egyptology. In 1934, Clark went up to Christ's College, Cambridge, where he read History before changing in his third year to Archaeology and Anthropology; his teachers included both Grahame Clark and Miles Burkitt, who contributed respectively to his concerns with environments and with artefact typology. During vacations in 1936 and 1937 he excavated under Mortimer Wheeler at Maiden Castle. It was at Cambridge that he met his future wife, Betty Baume, then reading Modern Languages at Newnham College. On graduating in 1937 he sought museum employment whilst undertaking volunteer work at the London Museum before obtaining an appointment in Livingstone, Northern Rhodesia (now Zambia).

A small museum had been established in Livingstone in 1930, mainly to house ethnographic specimens collected by administrative officers (Brelsford 1937); a few years later the collection was designated a

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memorial to David Livingstone. In 1937, at the instigation of the Governor, Sir Hubert Young, an anthropological research organisation, the Rhodes–Livingstone Institute, was established and the David Livingstone Memorial Museum, by then housed in the building of the United Services Club, was placed under its control. Desmond Clark arrived in Livingstone in January 1938 to serve (at a total salary of £400 p.a.) both as Secretary to the Rhodes–Livingstone Institute and as Curator of the Museum, Godfrey Wilson being at that time the Institute's Director.

Livingstone in 1938 was a small and isolated town (Phillipson 1975). It had been the capital of Northern Rhodesia until 1935 when the Governor and Secretariat moved to the more centrally situated Lusaka. The six miles which separate Livingstone from the Victoria Falls were (and are) a major obstacle to tourist development. With the departure of the central administration, Livingstone became essentially a provincial administrative centre and a railway town on what was then the main line of entry from the south. In due course, the Rhodes–Livingstone Institute also moved its base to Lusaka where, long afterwards, it became the Institute of African Studies at the University of Zambia. The Museum, however, was formally separated from the Institute and remained in Livingstone, re-designated the Rhodes–Livingstone Museum with its own Board of Trustees. (When Northern Rhodesia became independent in 1964 as the Republic of Zambia, the Museum became known as the Livingstone Museum, and its Trustees as the National Museums Board.)

On arrival in Livingstone in 1938, Desmond Clark found himself in a huge territory about the archaeology of which very little was known. He was not, however, the first Cambridge graduate to take an interest in this field; Farquhar B. Macrae, an administrative officer in the central and eastern regions, had pioneered this study more than a decade previously (Macrae 1926; Macrae and Lancaster 1937). The presence of palaeolithic artefacts in the Zambezi gravels near the Victoria Falls had been recognised for many years (Lamplugh 1906; Armstrong and Jones 1936), and early human skeletal remains subsequently attributed to *Homo rhodesiensis,* discovered in 1921 during mining operations at Broken Hill, had been deposited (there being at that time no museum in Northern Rhodesia) at the Natural History Museum in London (Pycraft *et al.* 1928). Later Stone Age deposits had also been recognised at Mumbwa in the Kafue valley (Macrae 1926; Dart and del Grande 1931). Just how little was known overall is conveniently demonstrated by M. V. Brelsford's *Handbook of the David Livingstone Memorial Museum* (1937) which went to press a few weeks before Clark's arrival in Northern Rhodesia: discus-

sion of archaeology occupies a total of seven pages (in the section headed 'Ethnological Collection'). Clark (1939), taking earlier discoveries as his starting point, summarised his aims in a twenty-seven-page pamphlet which provides a telling contrast with the Museum *Handbook*.

At Mumbwa, Clark conducted new excavations through deep stratified deposits which preserved a sequence from the Middle Stone Age onwards, paralleling the later stages of the Victoria Falls succession. The results, promptly published in the *Transactions of the Royal Society of South Africa* (Clark 1942), were particularly noteworthy on two counts: this was the first of many publications that was illustrated with Betty Clark's exceptionally accomplished drawings of stone artefacts, and because, almost alone of contemporary archaeological writings, it provided details of the pottery found in the more recent levels: such artefacts, now recognised as essential for the study of the archaeology of the past two millennia, were at that time generally ignored and discarded as 'kaffir rubbish'. Clark's research at Mumbwa was supported by a grant of £15. Subsequently, further investigations at the site (Savage 1983; Barham 2000) have provided much greater detail of a sequence now seen as extending over some 200,000–250,000 years.

Livingstone was a convenient base from which to investigate the Zambezi gravels, and Clark mapped these in considerable detail. Upstream of the Victoria Falls, gravels had been deposited at various heights as the Zambezi cut down through the Kalahari Sand to the underlying basalt. Downstream, the river flows through a zigzag series of gorges cut deep into the basalt, leaving gravels on the lips of the gorges as well as higher on the sides of the valley. Survey, surface collection and selective excavation enabled Clark to establish an outline typological sequence of stone artefacts and to link this with the processes whereby the river had cut both downwards through the sand and backwards along successive lines of Falls, leaving the gorges below. This research, essentially modelled on that of the Vaal terraces in South Africa (Sohnge *et al.* 1937), was not published until 1950 (Clark 1950a), although much of the fieldwork was undertaken between 1938 and 1940. Notwithstanding its prime importance in demonstrating the outline sequence of south-central African prehistory, it suffered from several inherent problems: it was carried out at a time when no reliable methods were available for establishing absolute ages, the artefacts were only very rarely recovered from primary contexts, and only occasionally were non-lithic materials associated. It was nonetheless clear that a long series of Acheulian-type industries was succeeded first by a phase characterised by core-axes, picks and

other heavy-duty tools, and then by industries based on flakes struck from prepared cores; these artefacts became progressively smaller through successive phases of the Middle Stone Age before being replaced by backed microliths. It is not easy for younger prehistorians today to appreciate the fundamental importance of establishing this very basic framework in a huge area whose prehistory was previously unknown.

Broken Hill proved to be a long-lasting interest. The site of the original discovery had long-since been quarried away (Hrdlicka 1926). Clark was, however, able to reconstruct some of its circumstances and to examine the material preserved at the Natural History Museum. At the Broken Hill Mine itself, near the town now known as Kabwe, he located occurrences of artefacts which he believed to resemble those associated with the *Homo rhodesiensis* skull. The results of this work were published (Clark *et al.*) in 1947 and subsequently. In the absence of radiometric dating, the age of this material was seriously underestimated and an appreciation of its full significance had to await further discoveries towards the end of the twentieth century.

The Clarks were in Northern Rhodesia for less than three years before the outbreak of the Second World War. Desmond served with the East Africa Command, mainly in Somalia and Ethiopia, being subsequently attached to the British Military Administration. Betty remained in Livingstone with their son and daughter. This is not the place to record Desmond's military exploits; more relevant is the ability that he demonstrated, while in Somalia and Ethiopia between 1941 and 1946, to study and record the local Stone Age archaeology. The localities investigated were determined primarily by military considerations, and Clark did not on this occasion penetrate the low-lying Rift-Valley regions where abundant remains of early hominids have recently been discovered and where he himself was to work in later years. Like the earlier Zambezi valley investigation, that in the Horn was written up and published after the war (Clark 1954), the two projects having comprised Desmond's Ph.D. dissertation, submitted in five volumes at Cambridge under Burkitt's supervision in 1950. The extensive collections which he made were mostly divided between his own museum in Livingstone, the Coryndon Memorial Museum (now the National Museum of Kenya) in Nairobi, and the Cambridge University Museum of Archaeology and Anthropology. Although Clark was once again hindered by the impossibility of obtaining absolute age-determinations, an overall framework was constructed which, partly because of the scarcity of subsequent more detailed research, retains much value (cf. Brandt 1986).

Returning to Livingstone after the war, Clark turned his energies, with great effect, to expanding the infrastructure for archaeological investigations in Northern Rhodesia both administratively and through nurturing awareness locally as well as internationally. Recognising the limited prospects for museum expansion, in 1948 he founded a parallel organisation called, officially, the Commission for the Preservation of Natural and Historical Monuments and Relics or, more popularly and concisely, the National Monuments Commission, with himself as secretary. This body was established under a new ordinance which controlled archaeological research and provided a measure of protection for sites and artefacts; it had its own commissioners and government subvention, independent of the Rhodes–Livingstone Museum, even though its separation in terms of premises and personnel was less clearly defined. The manoeuvre achieved two useful purposes: it increased the support-base for Northern Rhodesian archaeology and provided a useful counter-balance of authority which avoided the conflicts of interest which may arise when a museum has sole authority to control research and export. (Several African countries have experienced such conflicts, but this has not prevented Zimbabwe's amalgamation of two formerly distinct organisations; in Zambia, however, the re-named National Museums Board and the National Heritage Conservation Commission have retained their separate identity.)

Thus reinforced, Clark expanded his researches in previously uninvestigated parts of Northern Rhodesia. He initiated excavations at Nachikufu and other rockshelters in the central and northern regions, recording the associated rock paintings. He promptly recognised that the Late Stone Age microlithic industries of these wooded plateaux were distinct both from those which he had previously studied at Mumbwa and in the Zambezi valley and from those already known even further to the south; the schematic paintings, also, presented a marked contrast with the well known naturalistic art beyond the Zambezi (Clark 1950b; Summers 1959).

It was during one of these reconnaissances, in 1953, that Clark made a discovery of the greatest importance. In the extreme north of Zambia, the small Kalambo river forms the border with Tanzania. Flowing westward to the southern extremity of Lake Tanganyika, it enters the Rift over a spectacular waterfall with an uninterrupted drop of 726 feet. Immediately above the Kalambo Falls, the river flows through a small lake basin and, in its banks, Clark found numerous well-preserved artefacts of Acheulian type, apparently in association with wood. Excavations were

conducted at intervals until 1966, often on a large scale, revealing a stratified sequence from the Early Stone Age into recent times. Interpretation and publication of the resultant data proved to be a daunting task but was eventually completed (Clark 1969, 1974, 2001); an evaluation will be attempted below.

Clark's early years in Livingstone were ones of intellectual isolation. He has himself recorded (1990: 193) that, in 1938, 'there were only two or three professional archaeologists in the whole of the continent south of the Sahara, who . . . met only on rare occasions'. Fortunately, his contract of employment provided for overseas leave every three years; on these occasions the Clarks would rent a house near Cambridge in order to have the opportunity of writing while in contact with friends and colleagues.

The meetings of the PanAfrican Prehistory Congress, initiated by Louis Leakey in Nairobi in 1948 and held in Africa generally every four years thereafter, were particularly important in fostering contact and knowledge of research in other regions. As more posts were established within Africa, and archaeologists based elsewhere began to take an increasing interest in African matters, the meetings of the PanAfrican Congress have still retained their importance, becoming particularly valuable to the growing numbers of local scholars based in African countries with only limited opportunities for inter-regional travel. Clark attended all of the eleven meetings that were held during his lifetime.

In 1955 Desmond and Betty Clark organised the Third PanAfrican Congress in Livingstone (Clark and Cole 1957). Delegates came from all over the continent: a major achievement in those days of racial segregation was the organisation of accommodation for their African colleagues. In the absence of the Abbé Breuil, Louis Leakey presided; one of his duties was formally to open the Field Museum beside the Eastern Cataract of the Victoria Falls, which Clark had built over one of his excavations through the Zambezi gravel deposits. The Congress excursions took delegates to many parts of the territory up to a thousand miles from Livingstone, and into the then Belgian Congo, to see sites and excavations (Clark 1955; Mortelmans 1955).

At the same time, Clark was expanding archaeological capabilities and infrastructure in Northern Rhodesia. He greatly developed the Museum's buildings, collections, displays, and publications (Anon. 1951). He successively appointed to the Museum staff two young British archaeologists, Ray Inskeep and Brian Fagan, who pioneered the archaeological study of the last two thousand years, when the region saw the establishment of populations ancestral to modern African peoples. Additional

colleagues were appointed to the Monuments Commission, where John and Lilian Hodges were followed by J. H. Chaplin.

It was at this stage in his career that Clark had to face the problem that, as the employee of a Northern Rhodesian organisation, he was expected to do most of his work in that territory. But African colonial borders—like those of the succeeding independent states—were arbitrary, bearing virtually no relevance to modern populations and none whatsoever to those of the remote past. In 1959 Clark was invited by a Portuguese diamond company to investigate the archaeology of northern Angola where open-cast mining in the valleys of the southern Congo tributaries had produced large exposures of artefact-bearing deposits. This was important and stimulating research, subsequently published (Clark 1963), but it did not fit well with a British colonial base.

This broadening of horizons now led Clark to attempt a work of synthesis, *The Prehistory of Southern Africa* (Clark 1959), one of a highly influential trilogy published by Penguin Books between 1954 and 1960. This book made Clark and his work much more widely known: he was appointed CBE in 1960 and elected to Fellowship of the British Academy in the following year. Shortly afterwards he accepted a Chair in Old World Archaeology at the University of California, Berkeley, a base he retained for the rest of his life.

Following his move to Berkeley, Clark proved a popular and inspiring teacher, and his research operations became truly pan-African, as was reflected in his work on the *Atlas of African Prehistory* (Clark 1967). In Malawi between 1965 and 1968 he undertook and co-ordinated palaeontological, archaeological and geological research on the Pleistocene lake beds of the Karonga region, while also facilitating investigations on sites of later periods by several of his students and by Keith Robinson who was then unable to continue his researches south of the Zambezi (Clark and Haynes 1970a, 1970b; Robinson and Sandelowski 1968). Subsequently, in 1970–3, Clark turned his attentions northwards to investigate the development of settled life, cultivation, and herding in the Sahara and the Sudanese Nile valley (Adamson *et al.* 1974). Particularly important were his excavations beside the Nile (Clark 1984, 1989) and at Adrar Bous in Niger (Clark *et al.* 1973). In 1974 he returned to Ethiopia after an absence of almost three decades. With students and colleagues, and concentrating in the southeastern regions, he investigated Middle and Late Stone Age sites and rock art, also seeking evidence relating to early farming practices (Clark and Williams 1978). Subsequently, he became increasingly involved with research on earlier periods of prehistory, turning his

attention for the first time to regions beyond Africa: he undertook fieldwork in Syria (Clark 1967–8), India, and China.

At Berkeley, Clark found congenial colleagues, notably Sherwood L. Washburn and F. C. Clark Howell, with whom he developed close friendships and long-term collaboration. When Glynn Isaac (whose early death in 1985 was a sad loss both to Clark and to prehistoric studies worldwide) also joined the Berkeley Anthropology Department, there developed a school of African archaeology of unparalleled distinction. Its graduate students have gone on to hold important positions at many North American universities and in numerous African countries, notably Ethiopia, Kenya, Malawi, and Nigeria. The Department's decision, after Isaac's departure and death and his own retirement, not to continue this emphasis caused Clark sadness and disillusionment.

Glyn Daniel (1986: 422) saw fit to record that, in 1972, the Electors offered the Disney Chair of Archaeology at Cambridge to Desmond Clark in succession to his former teacher, Grahame Clark, but that the offer was declined, Daniel himself being subsequently elected. Desmond remained at Berkeley, taking formal but nominal retirement in 1986.

After retirement, Clark's attentions turned increasingly to Ethiopia where he undertook important work at the very early hominid sites of the Middle Awash region. This research, begun in 1982 following discovery by Taieb (1971) and earlier investigations co-ordinated by Kalb, was conducted in annual field seasons from 1990 onwards as a collaborative effort involving a large number of specialists. Clark was a major co-ordinator throughout, however, advancing age and failing eyesight gradually reduced his field participation. Although the importance of this work is clear, it has not been well served by the publications that have so far appeared. There have been a number of brief specialist preliminary papers (e.g. Asfaw *et al.* 1997; Clark 1987; Clark *et al.* 1994; Wolde Gabriel *et al.* 1994), but the one overview volume (de Heinzelin, Clark *et al.* 2000) is, frankly, disappointing in that it provides little comprehensive detail, particularly of the palaeontology, on a scale that would be commensurate with the effort and resources expended. It was unfortunate, too, that this research became enmeshed in professional rivalries and controversies with predecessors and contemporaries (cf. Kalb 2001) which caused much difficulty for the Ethiopian authorities (for an Ethiopian view of such matters, see Zelalem Assefa 1994).

In one of his autobiographical publications Clark (1990: 197) recalled his amazement that, in the 1940s, the Abbé Breuil claimed the ability to undertake typological classification of Acheulian artefacts by feel. Half a

century later, with rapidly deteriorating eyesight, he developed the same ability himself in the Middle Awash (Dr Yonas Beyene *pers. comm.*).

Although Clark was primarily interested, particularly in his latter years, in the archaeology of early, so-called Stone Age, periods, he did not ignore more recent materials. Much of his work, notably in Zambia, Sudan, and Niger, was focused on evidence for early settled communities whose lifestyle was often, but not invariably, based on cultivation and/or herding. He took a strong interest in African traditional culture and technology, using his observations to aid his interpretation of archaeological materials. Little more than a decade after his synthesis of the archaeology of southern Africa, he produced a comparable work covering the entire continent (Clark 1970). It is instructive to compare them: the second work is based far more securely on recent fieldwork, much of it multidisciplinary. It frequently takes a worldwide view and, as befits a shorter and more general work, is less concerned with local variations on the overall theme. Both books strongly emphasise the earlier periods, before farming and permanent settlement, in marked contrast with more recent syntheses (Mitchell 2002 and Phillipson 1993 respectively).

Clark himself (1990: 189–90) recognised three phases in the study of African archaeology: a pioneer period before 1930, a formative period 1930–60, marked by 'the introduction of a more scientific approach to recovering, dating and interpreting the context and distribution of cultural remains', and a modern behavioural and actualistic period beginning *c.*1960. An outline of Clark's own career permits a somewhat different view. I suggest that Desmond Clark's research prior to 1946 belongs essentially to a pioneer period where sites were considered in isolation and often recorded or investigated simply because they had been discovered, often by chance. After the Second World War a markedly different strategy may be discerned, based on seeking sites and planning their investigation in order to answer specific questions or to fill gaps in the known distributions. For the first decade or so this process was greatly hindered by the effective absence of means to establish absolute chronologies and, as a consequence, inter-regional correlations. During the 1950s radiocarbon dating became available, to be followed by potassium-argon and other methods which respectively provided the first reliable age estimates for the last forty thousand years and for the period before one million years ago. The first results thus obtained generally indicated a far longer timespan than had previously been considered likely; several archaeologists, including Clark, initially

regarded them with scepticism. It was, for example, some two decades after the first radiocarbon dates for the Zambian Later Stone Age were obtained that Clark fully accepted that this stage had begun significantly more than 20,000 years ago, as opposed to the 6,000 years previously estimated. Another source of misunderstanding was the lack of realisation that radiocarbon measurements before about 40,000 years ago must be regarded as minimum rather than absolute ages. Dates of *c.*60,000 years for the Kalambo Falls Acheulian were thus accepted in the 1960s as finite, whereas evidence more recently obtained has indicated a true antiquity four or five times as great. The third phase, for Clark, was marked by his move to Berkeley where his involvement with colleagues and students permitted his full participation in the international trend towards collaborative and multi-disciplinary research. In Africa, this period coincided with many countries' attainment of independence and the concomitant rising interest in local prehistory, and Clark was able to play his part in providing post-graduate training for young archaeologists from Africa. Despite his base in Berkeley, the controversies surrounding the rise and fall of the so-called New Archaeology effectively passed Clark by. He nonetheless deplored (1986: 188) what he saw as an increasing tendency to reconstruct prehistory on the basis of theory which was not based on firm primary evidence.

In later years, Clark sometimes found it hard to come to terms with changing economic fortunes and political priorities in post-colonial Africa. However, on his last visit to Zambia in 1995 he was gratified to be received with great warmth and affection by the Zambian staff of the institutions—National Museum and Monuments Commission—for whose foundation and development he had been largely responsible.

Clark's move to Berkeley had some effect on the flow of his publications. When he worked alone, he generally managed to publish his research reasonably promptly. When in the 1950s colleagues became available who were, in effect, research assistants, such as John and Lilian Hodges, publication fell behind. In Berkeley, early graduate students were able to work on much of this material and to publish it under Clark's supervision (e.g. Miller 1972). Clark's own fieldwork after 1960, however, presented greater difficulty: at Kalambo Falls, Adrar Bous and, to some extent, the Middle Awash, arrears of publication began to accumulate. Such was Clark's acknowledged eminence that he was inundated with invitations and requests for syntheses. The resultant papers and lectures were important and often highly influential, and Clark did not find it easy to decline such requests, although they took up a disproportion-

ate amount of his time, at the expense of writing up his primary research. However, with help from numerous colleagues, virtually all Clark's outstanding research had been published at the time of his death. He was particularly pleased when the third and last volume of the Kalambo Falls report was published in 2001 by Cambridge University Press. This volume provides a convenient measure of Clark's achievement and of the changes in research strategy which took place during his career.

Clark discovered the Kalambo Falls site, as noted above, in 1953. Having confirmed the important presence of little-disturbed Acheulian deposits with associated wood, he organised the first season of large-scale excavation in 1956. It was an impressive undertaking, unparalleled in Africa at that time, separated by a thousand miles of largely unpaved road from his base in Livingstone. Fortunately, it took place at a time of economic optimism, in the early years of the Federation of Rhodesia and Nyasaland, and resources from Northern Rhodesia were supplemented by grants from the Wenner-Gren Foundation. Clark's collaborators in these early seasons were drawn mostly from southern and eastern Africa. Further research on the site took place over the period of his transfer to Berkeley, the team becoming increasingly international: large-scale excavations were conducted in 1959 and 1963, with more selective operations in 1964 and 1966. A complex and detailed stratigraphic sequence was established which Clark (1964) was able to link both with local environmental changes and with continent-wide developments. When, finally, this material was comprehensively published in 2001, the descriptions of the stone industries placed less emphasis on detailed metrical statistics than would have been expected in the 1960s, but more on the processes by which they had been made: typology as a prime concern had been replaced by technology and conceptualisation. The verbal descriptions are once again greatly enhanced by Betty Clark's magnificent drawings. There is, however, disappointingly little consideration of the uses to which these artefacts may have been put by their makers. Kalambo Falls, despite the total absence of hominid and faunal remains, is a key site, providing the best sequence yet known for the processes which marked the final demise of the Acheulian. When this sequence was first demonstrated, current interpretations of the radiocarbon dating evidence suggested that these processes had taken place over a remarkably short period of time. Now that it has been demonstrated that some 200,000 years were involved, appreciation of these changes is greatly facilitated. Volume III of the Kalambo Falls report contains description of the Early and

Middle Stone Age artefact assemblages by Clark, with help from others, specialist contributions by a number of former students and other colleagues, and a major but concise evaluation of the sequence in its Old World palaeolithic context, by Derek Roe.

Desmond Clark displayed great learning, prodigious energy and productivity, wide friendships and warm hospitality. He was elected a Fellow of the Society of Antiquaries in 1952 and a Fellow of the British Academy in 1961. He was a Fellow of the American Academy of Arts and Sciences, and of the National Academy of Science (USA). His Cambridge Sc.D. was awarded in 1975 and he held honorary doctorates at Witwatersrand and Cape Town Universities (1985), along with the Gold Medals of the Society of Antiquaries of London (1985) and the Archaeological Institute of America (1989). The British Academy awarded him the Grahame Clark Medal for Prehistory in 1997. He became a citizen of the United States of America in 1993. He died in Oakland, California, on 14 February 2002.

Desmond and Betty Clark worked together for more than sixty years; she survived him by two months. She and the late Frederick Sisii Wamulwange were probably the only people who could invariably read his handwriting. Desmond acknowledged his professional debt to Betty, describing her as his life-long collaborator: 'What I have been able to do in archaeology has been essentially a team effort by the two of us and, had it not been for her input, it would not have been possible to do half of what we have managed to do between us' (Clark 1986: 181).

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Note. I am grateful for the help and advice of Mr John Clark (son of the late Professor Clark), Mr Ray Inskeep (former colleague at the Rhodes–Livingstone Museum), Dr Laurel Phillipson (former graduate student at Berkeley) and Dr Yonas Beyene (collaborator in Ethiopia). For the photograph here reproduced I am indebted to Professor Edward J. Lofgren.

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