

Dieter Salzmänn, *Untersuchungen zu den antiken Kieselmosaiken, von den Anfängen bis zum Beginn der Tesseratechnik*. Archäologische Forschungen 10. Gebr. Mann Verlag, Berlin 1982. 139 pages, 100 black-white plates, 2 colour plates, 2 maps.

This book is most welcome. In the light of growing interest in ancient mosaics the need for such a publication has been there for a long time now. As much as the corpora concerning mosaics of the Roman period have been becoming ever more numerous, so the earlier material had remained scattered in small articles usually and difficult to consult. An overall view of the hitherto known pebble mosaics and mosaics executed in transitional techniques was, if not impossible, then at least very cumbersome. Therefore, the author's effort to assemble nearly all the material available at present is laudable (for some additions see below). He has presented it in a well-arranged and well-illustrated catalogue preceded by a number of chapters of a more general nature discussing the main problems of early mosaics. Two chronological diagrams and two maps accompany the text.

With this book the research in pebble mosaics enters a new phase. The book will most probably remain for some time to come and for many scholars the basic reference for the forthcoming studies on the subject. As much as this will facilitate future research, so it has to be viewed with necessary caution, since every such general work runs the risk of establishing certain patterns of thinking which, as cliché, have then a long life of their own and, even if found incorrect, are difficult to eradicate. By providing a comprehensive catalogue, the book establishes a solid basis for confrontation of results obtained by the author with any future observations made by the readers themselves.

The catalogue comprises altogether 176 mosaics usually provided with illustrations; 135 mosaics were made of pebbles (in the introduction to his catalogue the author has mentioned only 132, three pebble mosaics listed in the Supplement being not included); 10 mosaics were executed of pebbles and tesserae (including mosaics from Kassiope listed in the Supplement); 31 mosaics were made of irregular (polygonal) or mixed (irregular and regular) tesserae. Eighteen mosaics have no illustrations, but the catalogue provides their descriptions. (For Cat. No. 165, mosaic from Salemi, there exists now a good illustration in D. V. BOESELAGER, *Antike Mosaiken in Sizilien* [1983] pl. IV, No. 7.) The two colour plates of high quality illustrate the developments in polychromy and shading. Listed are mosaics from Greece, Asia Minor, the northern coast of the Black Sea, Egypt and Libya as well as Italy, Spain and Afghanistan. Each catalogue entry gives the usual information, i. e. provenance, present location, a mostly comprehensive bibliography, concise but sufficient description, and dating.

The general part of the book comprises six chapters preceded by an introduction and terminated by a summary. In the introductory part the author discusses briefly the state of research, the aim of the study, the methodology and the terminology. Since earlier studies concerning the subject did not dispose of all the then available material, the author had correctly assumed that his foremost duty was to compile a catalogue as complete as possible. This enabled him to study in greater detail the development of pebble mosaics and facilitated the establishing of their relative and absolute chronologies. The assembled material led him to the conclusion that in order to define more precisely the beginnings of pebble mosaics, understood as a specific and separate kind of art production, the earliest pebble mosaics had to be discussed separately from the bulk of the later material from the fifth century B. C. onwards. The analysis of all the pebble mosaics led the author to discuss also the problems related to their disappearance and therefore induced him to include in his study the mosaics executed in transitional or mixed techniques, between pebble and tessellated mosaics.

In the first chapter the author discusses the time and place of origin of pebble mosaics. He underlines the fundamental differences between wall decorations of the fourth millennium B. C. in Mesopotamia executed of prefabricated clay cubes, sometimes described as mosaics, and the floor decoration of pebbles from Asia Minor and Greece. In a brief survey of the earliest pebble mosaics from before the fifth century B. C. of particular importance appears to him a floor found in Tiryns (Cat.No.129), of the fourteenth century B. C. In all probability, it represents the most ancient as yet example of the type of floor decoration which can be related to pebble mosaics. This floor permits the author to conclude that the beginning of floor mosaics may perhaps be placed in the second half of the second millennium B. C. in Minoan-Mycenaean Greece. His conclusions thus contradict a hitherto widespread opinion, based upon finds in Gordion, that mosaics originated in Asia Minor in the earlier centuries of the first millennium B. C. The earliest

mosaics from Asia Minor, datable to the eighth century B. C. – from Gordion, Arslan Tash, Til Barsib – are all characterized by a free, almost haphazard use of geometric motifs for decorative purposes. As yet there have not been found any early mosaics with central panels or figural representations. The early examples from Asia Minor allow the author to question the soundness of an old theory proclaiming that mosaics were conceived as imitations of textiles (carpets). He develops this subject further in one of the following chapters (p. 55 ff.) giving more arguments to uphold his views. Geometric motifs arranged in an orderly way begin to appear on Phrygian mosaics in the sixth century B. C. and later. Although no patterned mosaic floors from the Geometric and Archaic periods have been found in Greece proper, the technique itself of laying pebble floors must have continued, thus allowing for the creation of true pebble mosaics in the fifth century B. C. or perhaps even earlier.

The following chapter discusses the evidence for an absolute chronology of Classical and Hellenistic pebble mosaics. At the beginning there are presented a few literary sources referring to Hellenistic mosaics, but since the survey is rather short, the inquisitive reader may find it useful to consult other publications dealing with the same subject (cf. PH. BRUNEAU, *Revue Etudes Grecques* 80, 1967, 325–330; ID., *Un devis de pose de mosaïque. Le papyrus Cairo Zenon 59665*, in: *Stele, Papers in honour of N. Kontoleon* [1978] 134–143; ID., *Revue Arch.* 1984, 2 [1985], 241 ff.; also W. A. DASZEWSKI, *Corpus of Mosaics from Egypt* 1 [1985] 6 ff. and remarks by H. HEINEN *ibid.* 7 ff.).

Next a review is made of the well known archaeological and historical data which help in the establishing of an absolute chronology, data such as the dates of the foundation or destruction of towns, archaeological context of finds etc. Since this evidence is not sufficient for fixing the chronology of pebble mosaics, the author proceeds with a comparative study of vegetal ornaments, wine branches, tendrils, flowers on Greek architectural mouldings and on Apulian vases which are relatively well dated. The results of this study are then used for dating similar ornaments on mosaics. The author observes that vegetal ornaments in the course of the fourth century B. C. gradually increase in plasticity, illusionistic space effects and naturalistic details, to achieve an apogee in the second half of the century. By the end of the fourth century B. C. the ornaments begin to lose their vitality and gradually, in the first half of the third century B. C., become flat, stiff and linear.

In the following chapter the author uses the above summarized conclusions to build up a relative chronology and establish a stylistic history of all pebble mosaics. In his opinion there are four main phases of development. The first embraces the late fifth and early fourth centuries B. C. and is characterized by white silhouette-like figures and ornaments almost without inner details. Here belong the earliest mosaics from Olynth, Sicyon, Corinth, Megara etc. The second phase, roughly from 370 till 340 B. C., betrays the use of means aiming at the creating of perspective effects. Red and yellow colours are introduced and figures, which include some linear details, are clearly cut. The colours are sharply differentiated. The bulk of the material of this phase is found in Sicyon and Eretria, but some later mosaics from Olynth, Corinth, Piraeus and Athens also belong here.

The third phase, roughly 340–290 B. C., embraces some of the most spectacular pebble mosaics including those from Dyrrachium and Pella. It is in this period that the pebble mosaics achieve the highest artistic standard. Small pebbles of carefully selected sizes are set closely together. Graded colours enhance plasticity and three-dimensional effects. Use is made of lead or terracotta strips to mark contours and inner details. According to the author, the last phase begins in the third century B. C. At first it is characterized by a gradual disappearance of three-dimensionality and illusionistic effects, the reduction of colour gradation. Occasionally, there appear black figures upon a light background. In the later part of the century the overall composition undergoes a change. The figural panels become smaller and framed by complex borders. In broad terms, the author's periodization of the stylistic development of pebble mosaics is acceptable and convincing, although in my opinion the third phase ends earlier than has been suggested, while the last phase could be traced as far back as the final years of the fourth century B. C. There is no doubt, however, that his periodization should be useful in the general chronological assignment of future finds. The division into four phases allows the author some interesting observations concerning the already known material. Particularly captivating are his remarks regarding the mosaics from Pella. For instance, the Stag Hunt and the Amazonomachy mosaics are assigned to the earlier stage of development, while the Dionysos on a panther mosaic, with its flatter rendering of the figures and the lack of spatial illusionism, appears as a later development. It is to be considered how much of this stylistic difference is due to the individual taste of the

artist and how much to the time factor. If the author's periodization is useful in general terms, the assignment of individual mosaics may sometimes look arbitrary and questionable. The very late dating of the mosaics from Motya, Arpi and Aigeira (Cat. Nos. 72, 12–14,1), assigned by the author to the second half or the end of the third century B. C., does not seem convincing. The mosaic from Motya is quite unique in its way and betrays also features of a much earlier phase. In a more recent study D. v. BOESELAGER (op. cit. 19 f.) underlines the uniqueness of the Motya mosaic. She thinks that the pavement stands nearer to mosaics of the third rather than the fourth century B. C. If, therefore, the mosaic from Motya is to be assigned to the third century B. C., it probably should be one of the earliest. Its somewhat peripheral location, in a region where influences other than Greek were strong, must also be taken into consideration, since it may well be responsible for the uniqueness of the floor.

The relationship of frames to central panels on mosaics from Arpi and Aigeira, important for the author's late datings, is indeed different from such relationships on mosaics from Pella. However, it is far less different from some of the early mosaics in Olynth. The appearance of black figures upon a white background, which the author uses as a chronological criterion, is also a very fragile argument. Black figures on a white background appear on a mosaic from Sicyon (Cat. No. 116) which the author himself dates to 370–340 B. C. Black figures can also be seen on a transitional mosaic from Diospolis Parva (Hu), a remote place in Upper Egypt. On the ground of this particular stylistic feature the author assigns the mosaic from Hu to the second half of the third or the first half of the second century B. C. It appears, however, that the tholos of the bath in which the mosaic was found can hardly be earlier than the early first century B. C.

The mosaic from Nea Paphos (Cat. No. S. 3) seems stylistically more closely related to a slightly earlier phase of development than suggested by the author. Incidentally, this mosaic does not represent a polychromy reduced to black and white pebbles, but uses also yellowish and red stones. The coin of Ptolemy I was not found under the floor, but upon it (cf. K. NICOLAOU, *Il Mosaico Antico*. III Coll. intern. Ravenna 6.–10. Sept. 1980 [1984] 219 ff.). The chronological assignment of the floor from Nea Paphos could probably be about 300 B. C., not long after the foundation of the town sometime between 320 and 312 B. C.

The mosaics from Rhodes and Chalkis seem chronologically closer to the last phase of the Pella mosaics (i. e. Dionysos on a panther). They should also be considered in relation to the earliest mosaic from Alexandria, the Warrior mosaic (Cat. No. 133). The author dates the Alexandrian floor to the first third or the middle of the third century B. C. I have assigned the Warrior mosaic to the final years of the fourth century B. C. (concerning arguments about the dating see: *Corpus of Mosaic from Egypt* 1, op. cit., Cat. No. 1 and Appendix 1, p. 179).

The following chapter deals with the technique and composition of pebble mosaics. The author underlines an interesting fact that pebble floors were usually provided with three underlying layers of substructure – statumen, rudus and nucleus – in the way described by Vitruvius with regard to tesserae mosaics. He also discusses the materials used for pebble floors and mentions how carefully pebbles of equal size and grading colours were selected. There is, however, one important remark to be added here. It was the difficulty in obtaining the right material (pebbles of desired size and colours), and not just the aesthetic reasons, that precipitated the transition towards mosaics made of artificially cut stones.

The part dealing with the composition of pebble mosaics brings useful observations concerning the proportional relationship of the borders with regard to the central fields. One comes to the conclusion, however, that when used as a chronological criterion, these observations can have only a very general character. Some readers may also wish to inquire about yet another aspect of the overall composition of early mosaics, namely the threshold panels. In this respect they may find information in PH. BRUNEAU, *Les Mosaïques. Délos* 29 (1972) and W. A. DASZEWSKI op. cit.

The author investigates also the use of mosaics in various types of buildings. He points to the fact that pebble mosaics came to be used in private houses only in the later part of the fifth century B. C., while earlier they had decorated temples and public buildings. He justly considers it as but an aspect of a more general social process characterized by the growing importance of the richer groups of society and the accompanying refinement of private residences and import of luxury goods.

The survey of iconographic motifs on pebble mosaics brings the author to the conclusion that, except for one or two cases (cf. Cat. Nos. 29 and 119) when realistic motifs can be directly linked to the function of

the room or building, other motifs cannot be interpreted in this way. He concludes, however, that a great many motifs are of a dionysiac character or have dionysiac connotations and, therefore, indirectly point to the function, since they usually decorate dining rooms where offerings to Dionysos were customarily made. Apart from mosaics showing the god himself, he ascribes to this category a long series of figural representations including marine creatures and such vegetal ornaments as tendrils and elaborate flowers, not to mention wine branches and ivy. Some of these attributions and their interpretation seem questionable to me. Interpretation is always a subjective matter, but one has the feeling that many of the motifs, especially the vegetal ones, were used primarily for the sake of their great decorative value and not for their supposedly symbolic meaning. Dionysiac aspects are so frequent in many motifs throughout the history of ancient art and in all kinds of art products that it would be very risky to bestow upon all of them any special significance other than merely decorative.

If the part of the book referring to pebble mosaics should not generate greater doubts among the readers and most of the author's observations appear sound, while some are very interesting and penetrating, the last chapter regarding the transition from pebble to tessellated mosaics is likely to provoke critical discussion. His main conclusions are that tessellated mosaics developed in Greece and on the western coast of Asia Minor only in the end of the third or the beginning of the second century B. C., evolving from an intermediary stage of mosaics executed of polygonal stones. This intermediary stage coexisted for some time during the third century B. C. with normal pebble mosaics. His views thus contest the opinion recently expressed by K. DUNBABIN (*Am. Journal Arch.* 83, 1979, 265–277) that there is not enough chronological evidence to consider the mosaics of polygonal stones as an intermediary stage between pebbles and tesserae and that tessellated mosaics had developed independently from pebble floors, their roots reaching into the fourth century B. C. The most recent discoveries in Italy appear to give additional credit to Dunbabin's hypothesis and disprove the author's conclusions. During the last International Colloquium on Ancient Mosaics held at Trier in August 1984, W. Johannowsky presented new mosaics found in an early house at Volcei (Buccino) in Lucania and in a bath at Elea. Both mosaics use regular tesserae for the meander pattern and rosettes, signinum technique for bigger fields and some sort of black filling for the background of meander and wave-crest patterns. Also an especially cut marble roundel is used at Volcei for the centre of a tessellated rosette. On archaeological grounds the Volcei floor was assigned to the late fourth century B. C. W. Johannowsky underlined the similarity of the meander pattern from Volcei to the meander on an early tessellated floor from Gela usually assigned before 282 B. C. In his publication the author contested the early dating of the Gela floor, while D. V. BOESELAGER (*op. cit.* 24 ff.) was less categorical considering the Gela mosaic to be earlier than the tessellated mosaics from Morgantina.

The new mosaic from Elea has been assigned by excavators to the first thirty years of the third century B. C. Yet another mosaic from Elea made of partly cut pebbles of white, black and reddish colour was assigned to the period between the late third and early second century B. C. (cf. W. JOHANNOWSKY, M. ROMITO, *Ein hellenistischer Fußboden in Volcei*; W. JOHANNOWSKY, G. SCARANO, M. ROMITO, *Hellenistische Mosaikfußböden in Elea und Volcei*; W. JOHANNOWSKY, G. SCARANO, *Hellenistische Fußböden in Elea*, to be printed in the *Proceedings of the Trier Colloquium*).

In a short paper prepared for the Berlin Colloquium on Ptolemaic Egypt held in 1976, I briefly exposed the view, based upon the reexamination of the archaeological context of mosaics in Alexandria, that the complete sequence of the transition of mosaics from pebble to tessellated ones can be witnessed there from the end of the fourth throughout the three quarters of the third century B. C.; around the turn of the century and in the early second century B. C. there appear in Alexandria some very fine vermiculatum mosaics. In his publication the author has suggested a different, usually later chronology for the Alexandrian pavements without, however, presenting any fresh archaeological arguments to back his new datings except for very general stylistic considerations. An interested reader may find a detailed discussion of these problems in Appendix I to my *Corpus of Mosaics from Egypt 1*. I uphold there all my earlier observations and chronological assignments concerning the Alexandrian floors.

In the light of new discoveries in Italy and the material from Alexandria as well as all the material collected by the author himself, it becomes clear that the process of transition had not occurred in Greece and Asia Minor alone, but in many parts of the Mediterranean roughly at the same time. It must have started already by the end of the fourth century B. C. In the present state of research, the transitional mosaics from Italy and Alexandria appear to contain earlier examples than those listed by the author from Greece and Asia

Minor. This, however, may be due to a but temporary lack of evidence. The mosaics made of polygonal stones do not seem to be an intermediary stage, but rather a parallel and marginal development without further consequence. At present, only in Alexandria, among the many places where the process of transition had occurred, can one witness a complete sequence of the transition on mosaics in the context of one site. This fact does not in the least imply Alexandrian priority or exclusivity, but it need be remembered and not underestimated.

To a very exhaustive list of mosaics presented by the author one may add at present only a few new discoveries in addition to one old floor. These are listed below. With the author's book the study of pebble mosaics thus enters a new phase and the author has to be congratulated for his important contribution.

1. Pebble mosaic of Classical period, reused in a Roman House in Corinth, cf. CH. K. WILLIAMS II, O. H. ZERVOS, *Hesperia* 52, 1983, 1 ff. esp. 18 ff., pl. 2a.b.c; also G. TOUCHAIS, *Bull. Corr. Hellénique* 107, 1983, 755 ff., fig. 24.
2. Pebble mosaic of multicoloured stones found in 1936 at Famagoria on the Black Sea, assigned by the excavators to the fifth century B. C. The mosaic is 2.77 m long and 0.93 m wide. It displays two rectangular fields differentiated from each other by the manner of setting of the pebbles in the mortar substructure. Cf. W. D. BLAWATSKY, *Otčot o raskopkach Fanagori w 1936–37 gg. Trudy GIM* 16 (1941) 22 fig. 12; also M. M. KOPYLINA in: *Archeologia SSSR 9. Antičnyje Gosudarstva Severnogo Pričernomoria* (1984) 216.
3. Remaining part of a sphinx and panther mosaic from Maison aux mosaïques in Eretria (part of Salzmann mosaic Cat. No. 38), cf. G. TOUCHAIS, *Bull. Corr. Hellénique* 108, 1984, 815, fig. 148.
4. Pebble and tesserae mosaic from Taormina, second century B. C., cf. BOESELAGER *op. cit.* 34 f., fig. 8.
5. Pebble mosaic in a Hellenistic house in Elea assigned to the late third or early second century B. C. (Cf. JOHANNOWSKY, SCARANO *op. cit.*).
6. Early tessellated mosaic from Volcei, assigned to the end of the fourth century B. C. (Cf. JOHANNOWSKY *op. cit.*).
7. Early tessellated mosaic from a bath in Elea, first third of the third century B. C. (Cf. JOHANNOWSKY *op. cit.*).