

A pebble mosaic in Piraeus

A well preserved pebble mosaic of a galloping quadriga (fig.1) lies in the wine cellar of a Piraeus restaurant (the Spiglia). In technique it seems comparable to other pebble mosaics from Olynthos and Corinth dating from the fifth and fourth centuries B.C.; its crisp, sophisticated style and its iconography suggest a fourth century date.

The cave it adorns has been identified as the Serangeion by <sup>1</sup> Dragatsis, who published the site in Eph. Arx. 1925-6, pp. 1-8. Ancient authors refer to the Serangeion both as baths and sanc-<sup>2</sup>tuary: Aristophanes mentions it in his lost play the <sup>3</sup>, Isaeus points out that the owner earned the tidy sum of 3000 minas from these baths <sup>4</sup>, and scholiasts include it in their dictionaries.

Two mosaics were discovered here. The second, Skylla with her dogs, is now completely covered by an adjoining wall and reproduced only by a line drawing <sup>5</sup>. The excavator suggested a Roman date for both; <sup>6</sup> since the accompanying illustrations scarcely do justice to the floor its similarity to the Greek pebble mosaics has not been recognized. Mr. Vanderpool suggested that in the light of recent discoveries and research on the subject the dating should be revised to an earlier period.

The scene is skilfully executed in naturally rounded uncut pebbles whose duplicates can be picked up on the beach below. The average size is about 1 x 1.1 cm.; they are laid quite close together, about 100-110 stones per 10 sq. cm., in a hard red cement. The figures are white on a blue-black ground. Internal modelling is defined by dark lines a single stone thick, while accessories

are filled in with varying shades of orange-red (reins, harnesses,<sup>2</sup> the driver's hair) and grey-green (hoofs and cheek pieces).

The driver presents a lithe, lively figure as he leans forward with arms extended, chiton flying in the breeze. His determined outthrust head is seen in profile; the body in three quarters view. The eyebrow rises at an intense diagonal from the forehead's outline, the eye is heavily accented by two lines of the upper lid and one of the lower, by black pebble at the outer corner and forward vertical of the eyeball. The head seems to be covered by a bathing cap, but very likely the red area represents hair like the Sikyon figure's.<sup>7</sup> The cap effect is accentuated by a white outline, comparable to the halo-like accents in vase paintings,<sup>8</sup> and the extension of this line below the small of the ear. (The wisps of hair escaping from under fillets somewhat resemble this line,<sup>9</sup> but it may well be shading under the skull and jawbone).<sup>10</sup> The Ionic chiton with gathered sleeves is similar to the Delphi charioteer's. It falls into a few soft folds about the neck. Below the waist it separates into falling and blowing folds, which indicate that his left leg is bent forward, his right extended back.<sup>11</sup>

The driver's right arm, bent back, divides the torso into two equal units repeated in the distance from shoulder to top of head. The torso is terminated by the horses' flying tails; the chiton's billowing folds reappear below, and again disappear in favor of the chariot's wheel. The extended left arm, modelled slightly at the elbow, and the reddish reins stretching from the other hand, divide the background area into nicely balanced units while leaving enough dark area to provide relief for the light mass of the horses.

The horses fall into more stereotyped form than the driver. Their bodies are raised into a flying gallop of about 30 degrees from the horizontal. Two extend their legs straight back, the other two bend their rear legs prancingly; all forelegs are raised in a common pattern. Their heads all face threequarters forward, in repeating white serrations from the compact mass, but are distinguished by slight individual differences. Eyes are outlined by large black ovals, pupils are black dots in the center, red pebbles accent the corners (the foremost horse has red dots on both sides of the pupil, the others only on the left.). The farther eyes form white ridges against the background. <sup>fig.3</sup> Eyebrow ridges, nose bones, nostrils, cheek folds, neck and chest muscles, thigh joints, sheaths, leg muscles are executed in considerable detail in looping linear simplifications of realistic renderings. The artist even forgot structure in swinging the near horse's body through <sup>fig.4</sup> to his leg rather than bringing it up to his chest.

The contrast between charioteer and horses suggests that the mosaicist was more at home with the human figure, but felt it necessary or was requested to copy the horses. He seems also to have conceived of individual silhouetted elements in the round, but a group of horses merged into a large area to be broken at decent intervals by relieving details. Legs and the leading horse's snout, silhouetted against the background, share some of the charioteer's life-like quality, while the short straight lines in the horses' manes, the staccato touches of color in their hoofs could be classed as decorative.

The body of the chariot appears only in a bar above the horse's rump. Wheels and axle, particularly the juncture of the axle with the farther wheel, show considerable interest in problems

of perspective. (fig.4) The drawing in Eph.Arx. does not show the axle, and the legs of the horses near this point indicate some restoration (shown by darkened areas in the photograph). But the axle itself seems to be of the same workmanship as the majority of the mosaic, and since the drawing is inaccurate on many counts I am inclined to believe that it is original.

The dark background below the horses' bellies is broken by a dolphin diving down in a balancing diagonal (again at an angle of some 30 degrees, this time below the horizontal). Its axial line forms an extension of the direction initiated by one of the horses' parallel forelegs. Along the right side of the mosaic the dark area silhouetting the horse's head, broken by his forelegs, and divided by the dolphin, serves to balance the ground in the upper left, which silhouettes the driver's head, is broken and divided by his arm and reins. In the lower left background serves a different function by presenting dark accents, round and wedge shaped between the wheels, long and pointed between legs.

The mosaic forms a trapezoid about 2.10 m. high and 2.70 m. across top and bottom. The left side is flush with the cave wall, which slopes inward toward the bottom of the picture; the right side slants out at a corresponding but geometrically regulated angle, as if the mosaicist had adjusted a rectangular design to the requirements of the site by plotting his points a little to the right at the base. The composition is compactly framed by <sup>14</sup> three rows of white stones on three sides except for a short distance in the lower left corner, <sup>fig.5</sup> beyond <sup>three of</sup> the horses' rear legs. <sup>some key point of</sup> The end of the frame seems to mark the end of the original design; it was not continued when the short interval to the wall was

filled in with pebbles.

Beyond the frame ( a little over 3 cm. wide) the floor continues without a break in a different type of pavement, made up of larger stones set loosely without pattern. No geometric patterns are to be found in the cave.

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Some thirty five other pebble mosaics have been found. Of these only a few show figure subjects, so we cannot hope to place our mosaic exactly. Most of these are datable to the fifth and fourth centuries B.C.. All the large scale figure scenes executed in pebbles are generally placed before the <sup>general</sup> introduction of tesserae, perhaps in the early third century.

The Corinth <sup>18, fig. 6</sup> pebble mosaic of two griffins attacking a horse is similar in many respects. The figures are reserved in white on a dark ground; their outlines and internal modelling is executed with the same linear éclat. A frame of three pebbles wide separates, as in Piraeus, the panel from the surrounding unpatterned floor. Stones are set closer together (150 per 10 sq. cm.); the average pebble is longer and thinner (.75x1.25 cm.) The stones have been somewhat smoothed to a flatter surface than those in Piraeus, which remain in their naturally rounded state, and project farther from the cement. The cement is light tan, of a coarser grain than the darker, harder cement of our quadriga.

In style the Corinth mosaic appears earlier. Characteristic profiles are more stressed, internal modelling is less sophisticated. The horse's chest, in three quarters view, bears a marked similarity but its head turns to an awkward violent position in profile which contrasts with the competent stereotyped three quarters views in Piraeus. Unfortunately most of the head is missing; the tip of the nose and top of the forehead remain to indicate the restoration. The small circle of the

nostril, the dark slit of the mouth contrast with the bulbous protruberances and details on our horses; the free flowing though stylized strands in the mane produce a different effect from the sharp parallels in Piraeus. The horse's ribs have been restored in three echoing curves, perhaps in imitation of the griffin's chest. The original may not have appeared as archaic as the restoration; the griffin because of his traditional nature might well have been represented in a more archaic manner than the horse.

The mosaic was found with fifth century fill for the early fourth century agora. The excavator feels confident that the surrounding material dates it in the fifth century.

The other large pebble mosaic from Corinth consists of animal groups around a circle of lotuses and palmettes. It has been reburied and I have been unable to examine it, but from the photograph it does not seem to resemble the Piraeus floor or the other from Corinth as much as the mosaics from Olynthos. The horse has little in common with those from Piraeus save the extended rear leg : the facial modelling consists of a single lined smirk and a circular eye , the mane is conceived as white lines projecting into the dark ground rather than as a white area cut by black lines. The animal is seen in profile. The griffin's wings are not made up of the long sweeping lines characteristic of the preceding mosaic; rather a greater illusion of activity and depth is produced by irregular vibrating lines. The position of the griffin is comparable to those in the doorway of the Bellerophon mosaic in Olynthos. It pounces in a flurry of activity rather than deliberately stretching out to preen like its Corinthian companion. The accompanying wave patterns are

cf. Molyne  
Lalor?

stubbier and shorter than Bellerophon's; palmettes, on the contrary, are longer and more aristocratic. Robinson dates the second Corinth pavement in the fourth century. 122

Nearby in Sikyon the engaging pebble mosaics are similar in technique though slightly different in style. Charming centaurs gallop briskly around a ring of assorted animals in one pavement, other animals and a figure are associated with wave patterns in other fragments. All are white on a dark ground except the human figure, who is silhouetted in dark on light. A masterly handling of details - the curve of an arm, a deer's hoof as distinguished from a horse's, the twinkle in a centaur's eye, the even curve of a palmette leaf (more compact and shapely than the Corinth palmette, like it longer and more developed than the Olynthos Bellerophon's) - combines with a sense for the over-all rhythm of a composition. It seems feasible because of their similarities to treat them as a single group.

The centaurs' chests are modelled by lines somewhat similar to the Piraeus' horses, but simpler; the figure's head is capped in red like our charioteer's. But the Sikyon mosaics are on the whole nearer to those in Olynthos than to the Piraeus or Corinth floors. The centaurs are shown in sleek profile except for their chests: a more calligraphic profile than ~~Bellerophon's~~ Pegasus, but realistic compared to the Corinth griffin's arbitrary outlines and vibrant with energy compared to the stereotyped contours of the Piraeus horses. Their legs are straightened out behind them like the foremost pair of our quadriga, but little attempt is made to make the position appear natural as in our mosaic. In this they contrast with the Olynthos horse's rear legs, bent normally in the Parthenon tradition, and with the flaying appendages of the buried Corinth floor.

The nude figure bears a strong resemblance to Achilles in

figs.  
Praktika  
1935  
p.82  
1936  
p. 94  
1938  
p.122  
1941  
p.59

Praktika  
1938  
p. 122  
fig. 3

J.H.S.  
LIX, 1939  
pl. XIII

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in Olynthos, a general likeness to the Piraeus figure. The charioteer and the Sikyon man both have red hair tightly fitting the skull. The Sikyon mosaicist felt no need however to emphasize the red hair by outlines; in Piraeus a black line separates it from white, white from black. The black man's eyes consist of a single large dot with a few pebbles above for the eyebrow in contrast to the elaborate definition of the Piraeus mosaic, the charioteer's head is more elongated in the front and rounder at the back. Achilles' eyes are simple like the Sikyon figure's, a curved outline defines the ear in much the same place, skull and face are the same shape. He too is nude, bears himself with easy grace; even his fingers are similarly emphasized. I do not know whether the similarities warrant the suggestion that the same mosaicist executed both pavements. The inversion of silhouette in the Sikyon figure and his polychromy might argue against linking them together, but red is used in other accents on the Achilles floor, and dark on light seems to be combined with light on dark panels on the same pavement.

Praktika  
1936  
fig.9  
p.94

Olynthos  
XII, Pl.3  
or  
AJA 38  
1934 Pl.30

The animals bound along with self assurance in their circular and horizontal bands. The horse's body stretches out horizontally rather than at an angle like the Piraeus quadriga and ~~Bellerophon~~ <sup>Pegasus</sup>. A circle with an extra pebble for the corner defines the eye (more elaborately than the Bellerophon mosaic, less elaborately Piraeus). A single dot forms the nostril, two or three pebbles the mouth. The mane is suggested by a white area broken by black dots. The black stones are set in a little from the edge somewhat irregularly in order to produce a slight

Praktika  
1936  
p.94  
fig.8



effect of motion, which is not as strong as in Bellerophon's shimmering hair, not as clearly defined as with the ruffled strands of the mosaic in the Corinth museum, but contrasts with the static effect in <sup>The</sup> Piraeus manes. The Sikyon griffin seems to lie between the two Corinth griffins in character. The long loops of the deer's horns <sup>30</sup>, the delight in the curve of a body line for itself are reminiscent of the long sweeps to be seen in the Corinth museum; but the figure action and space concept are more fluid.

The Sikyon mosaics are believed to date from the end of the fifth century or the beginning of the fourth. <sup>31</sup> Robinson dates them in the fourth. <sup>32</sup>

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Among the pebble mosaics visible in this region none uses the elaborate perspective devices and internal modelling employed in the Piraeus floor. This would seem to indicate that our mosaic is to be dated later. The somewhat stereotyped effect conveyed by the Piraeus horses in contrast with the fresh vigor of the Sikyon floors and the <sup>firm</sup> lucidity of the one in the Corinth

(Although we must bear in mind that the stiffness may be due to copying a subject and style a little out of the artist's line.)  
 museum seems to confirm a later dating. But the many points in common suggest that it was not made too much later. The similarity of technique between all of them; the balance of lights and darks, the taught outline, and the horse's chest in the Corinth museum; the easy sure modelling, the interest in representing motion, the centaurs' chests, the horse's mane, and the human figure's head in Sikyon link the pavements into one group.

The chronology within the group is difficult to reconstruct. We know that the mosaic in the Corinth museum is fifth century. The griffin's ribs appear almost archaic; if the horse's ribs

are similar it surely precedes the Sikyon floors, I should think, and it is very likely that it does at any rate. The only floor in which ribs are similarly represented is in the House of the Comedian, in Olynthos. A lion in the animal border has two ribs only lightly suggested (not swept in with the Corinth assurance.)<sup>33</sup> The pavement is dated before 420 by analogy to the mosaic in House B VI I, which contained a horde of coins stopping at 420.<sup>34</sup> The floor of the House of the Comedian is also compared in technique to the pebble mosaic in Motya, Sicily. Though <sup>it is</sup> far cruder in workmanship than the Corinth scene, the similarity between chest, stomach, and leg contours of the Sicilian animals and the Corinth griffin may well be significant. Motya was destroyed in 397;<sup>35</sup> the floor is believed to date from the late fifth century.<sup>36</sup> It is difficult, however, to decide that the elegant Corinth pavement has more in common with these less impressive scenes than with the Piraeus mosaic, on comparable scale and of similarly refined workmanship. The encircling frame, surrounding floor and spacing within the frame have much that is similar. The mosaic may mark an introductory step into the grand style of pebble mosaic work. It was very likely in use for some time before it was scrapped with other material from the late fifth century. Or it may indicate that there had been considerable development of the technique before its known terminus ante quem, if similarities with the Piraeus mosaic are significant.

The Sikyon floors mark a peak of development in the technique and seem to me to mark a point at which the design was conceived in terms of the pebble mosaic medium rather than adaptation of other mediums, vase painting or relief work. It would

be useful to know at what period this stage of development occurs; unfortunately there is no excavation evidence to help, and it must be dated on stylistic grounds. Comparison with vase paintings indicates a late fifth or early fourth century date to the excavator, Mr. Orlandos. <sup>37</sup> (A certain lag is generally allowed for mosaics, which are apt to be a conservative medium). The palmette is quite comparable to the Erechtheum's. The Achilles and Thetis pavement in Olynthos, to which we compared the Sikyon figure, is dated in the late <sup>38</sup> fifth century by comparable but less developed palmette designs. <sup>39</sup> The compositions of both are paratactic rather than overlapping, in contrast with the Piraeus mosaic. The Sikyon floors' fresher viewpoint and simpler presentation may well indicate a slightly earlier date than the Achilles group. It seems likely that two-dimensional concept which determined it preceded the three <sup>40</sup> dimensional design in Piraeus (although the reverse is possible.)

Tentatively, then, we have suggested that of the three mosaics visible in this area the Corinth one came first, the Sikyon ones next, and the Piraeus last. The House of the Comedian in Olynthos, which we suggested might be associated with Corinth (on somewhat tenuous grounds) is <sup>41</sup> believed to precede the Achilles floor, which we associated with Sikyon. We have used several of the Olynthos pavements as catalysts for comparing isolated features of the mosaics with which we have particularly to deal; let us now compare a few pertinent ones to the Piraeus quadriga.

### Olynthos

The series of pebble mosaics excavated in Olynthos are the outstanding examples of this technique. <sup>42</sup> All date before the destruction of the city by Philip in 348 B.C., probably from the late fifth and early fourth centuries. <sup>43</sup> Unfortunately I have

been unable to examine them, since they have been covered again, but they appear to have much in common with the Piraeus pavement.<sup>44</sup>

A chariot group from the Villa of Good Fortune appears earlier in style than ours. Two panthers, repeated heraldically in profile, draw the chariot. They stretch out in a horizontal flying gallop comparable, though not as graceful as, the Sikyon leaps. *The panthers are spotted like the deer.* The chariot is seen in profile, reins (like ours) and chariot are red. Figures are not modelled in great detail: Dionysos, the driver, is a rigid little figure encompassed by billowing draperies, the other figures in the scene and surrounding border assume free positions. The composition is more cluttered, more regimented than ours. Robinson dates the mosaic between 420 and 410.<sup>45</sup>

AJA 38  
1934  
pl. 29  
and  
Olynthos  
XII  
Pl. I

The Achilles and Thetis mosaic from the same house seems closer to the Piraeus floor as well as the Sikyon group. The human figures show the same masterly handling, the hair of Achilles assumes a cap-like compactness, drapery folds around the women's necks are comparable, respect for the relationship of shapes in background areas is here also evinced (not as markedly, however, as in Piraeus or Corinth.) The eyes are however merely unaccented eyebrow curves and dots, drapery is articulated in greater detail. Robinson suggests a late fifth century date derived from the associated geometric designs, general style, and finds in the house.<sup>46</sup> (The villa seems to have been built 430-420 B.C. and continued in use until the destruction in 348.)<sup>47</sup>

AJA 38  
1934  
spl. 30  
and  
Olynthos  
XII  
Pl. iii

The panel of Nereids and sea animals from House A VI 1 approaches the Piraeus floor more closely. It is believed temporary with the previous mosaic<sup>48</sup> although its design shows greater variety, the figures<sup>a</sup> more three-dimensional concept,<sup>49</sup>

its composition greater concern for over-all integration. The eyes of the figures are more accented, their drapery more simplified than in the preceding mosaic. But the eyes are not as emphasized as the Piraeus charioteer's and the schematization we found in our horses is not present. On the other hand the features and figures are more full blown than those in Sikyon, they turn rather than maintaining a direct sideways route, the momentum of their lines like their course is checked to a more deliberate pace.

Olynthos  
V, Pl. 2, 11

Bellerophon<sup>50</sup> provides an interesting contrast with our mosaic. Pegasus too rears on his hind legs, but they are bent naturally rather than straightening out into a flying gallop. The accompanying chimaera, an unnatural beast, is visualized in the flying position. Horse, rider, and chimaera are shown in characteristic profile, without perspective save for the additional plane introduced by the foreground figure. Internal modelling is sketchy but produces a greater illusion of reality. Wings and hair, for instance, are distinguished by vibrant irregular lines. In contrast to the sharp straight lines in our Piraeus manes and tails. The fluffy feathers in Pegasus' wings contrast also with the long smooth feathers of the griffin\$ in the Corinth museum. Each of Pegasus' heavy feathers is made up of one to two or at the most three white pebbles while the Corinth griffins tapers gradually from a point to five or six rows in great elegant sweeps. Each wing is distinctly defined in Corinth, while one tends to merge into the over-all effect of activity in Olynthos. In both Piraeus and Corinth (the museum mosaic) pebbles seem to be packed firmer within taughter outlines; the freer transition between figure and background in the Bellerophon

AJA 36, 1932  
Pl. 1  
Olynthos V,  
Pl. 1, 12

Olynthos

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floor also makes for a greater feeling of motion. These technical details add to the centrifugal force which dominates the composition of both rectangular and circular frames in this pavement. In this case the style, along with the subject and its composition, may be attributable to a model. Robinson suggests that the design may be taken from Corinthian coins brought by the Potideans when they took refuge in Olynthos after the destruction of their city in 432 B.C. <sup>53</sup> Yet the same interest in illusionism (if the style may be so called) is also to be seen in the folds of the Achilles mosaic and the mane of a nereid's sea horse, in contrast to the sculptural scorn our Piraeus mosaicist exhibits for textural differences and the calligraphic strokes on the Corinth animal.

Bellerophon is dated in the late fifth century from accompanying ornamental motifs (quite similar to those in the Villa of Good Fortune), <sup>54</sup> The Piraeus mosaic seems somewhat later. It seems to represent a further development of style, greater facility and boldness in the pebble mosaic technique (as evidenced by the size of the figures as well as handling of perspective) and details accompanied by a loss of freshness. To what extent date and/or locale account for the differences is still a matter of speculation.

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Our examination of the Olynthos mosaics as a group seems to bring out a distinction between northern and southern styles. We have noticed tendencies toward illusionism in the northern group; the mosaics from central Greece, with the exception perhaps of the buried pavement in Corinth, have been characterized as linear. If this distinction is valid the group described above may fit between the Corinth museum and/or the Sikyon floors and the Piraeus

quadriga chronologically.

Olympia II  
Pl. 105 and  
Blouet I  
Pl. 63, 64

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OJH 21/2  
1922/24  
fig.122  
bb.205

The pebble mosaics from Olympia and Dyrrhachium probably follow all those yet mentioned, including the Piraeus floor. They bring the element of color forcefully to our attention. We have noted small patches of color on accessories in the Piraeus, the Sikyon, and several of the Olynthos pavements. Various colors are occasionally strewn into background or figure areas of predominantly black or white in Olynthos, but they are used to vary the flat field rather than to model it. Robinson finds no chronological significance in the use of color at Olynthos.

In the two pavements under discussion however the colored stones are used as a painter would use his pigments, to model the figures. Mosaics made from cut tesserae were conceived in this manner from the third century on. In Olympia a few cut stones are also used; the mosaic is therefore considered transitional, and dated in the second half of the fourth century. The Dyrrhachium floor is placed somewhat later than 300 B.C. by Praschniker on the basis of parallels in Apulian vase paintings.

The Olympia pebble mosaic is now almost completely destroyed; only a few stones of the lotus and palmette border remain, and the design is almost unrecognizable. The remaining pebbles vary greatly in size, from about .5 to 2.5 cm. across. They average about 1 x 1.5 cm. In the remaining portion they are set farther apart than in the other floors I have seen, perhaps 50 to 10 square cm. rather than 100 (Piraeus and Sikyon) or 150 (Corinth). Very likely they were smaller and closer together in the figures. So by refinements of size as well as color the mosaicist ~~the-mosaicist~~ focuses on some elements at the expense of others in order to produce a greater illusion of reality or a more striking effect. The same technique and motivation is characteristic of Hellenistic mosaicists who worked with cut stones. In the earlier pavements we found balanced compositions generally made of

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stones chosen for their uniformity.

Fortunately the French expedition to the Morea made a drawing of the pebble mosaic in the early nineteenth century while it was still well preserved. Much had disappeared by the time the Germans excavated in Olympia, but they were able to photograph one figure to corroborate, amplify, and in some details contradict the earlier drawing. He is a full blooded triton blowing energetically on his horn. The cupid perched on his tail expresses in every bend of his little body the devilry which animates the Hellenistic cupids on the dolphin pavement in Delos. Transitional is an inept word with which to characterize it, for it is bursting through the threshold of the new style rather than slinking out the back door of the old. In spirit we would compare it more nearly to the Sikyon pavement than to the Piraeus floor, but in composition it resembles more nearly Piraeus' considered balance than Sikyon's instinctive momentum. Both the Sikyon and the Olympia mosaics represent boisterous half human figures facing the same direction with chests in three quarters view and heads in profile and with attributes carried in a similar position. A lotus and palmette border accompanies each, but is used in different ways. Comparison of details brings out the contrast, however. The outline of the Triton fades into the background, partly because the pebbles are large and loosely set, but very largely because the mosaicist did not conceive of his figure in terms of outline so much as in terms of mass. The Triton's gleaming white eye and black eyeball are cut stones whose textural contrast with the surrounding pebbles produces a florid effect quite at variance with the casual expression of the centaurs. Their eyes, while quite elaborate and sophisticated, are calculated to fit into their context rather than dominate it.

The Piraeus mosaic seems to fit between the two in many ways. The charioteer's eye is accented, but not as much as the triton's; the driver's is given an intense expression through lines a brush might have created, while the Olympia

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mosaicist is exploiting his own medium of stone to create an effect. The three dimensional concept is expressed by linear perspective devices in our mosaic, by the handling of color in Olympia.

The <sup>62</sup>Dyrrhachium pavement differs from the Olympia one in that its technique appears more traditional while the design is freer. The pebbles seem from the photograph to be quite uniform in size and set quite evenly; no cut tesserae can be distinguished. The woman's head which dominates the scene is however done in considerable detail in three quarter view. Her hair is red like our charioteer and like his outlined in white; a red pebble similarly sparks the corner of her eye. But the features are executed in much greater detail on a larger scale. The pupil of the eye, for instance, is carefully defined and highlighted by red and yellow pebbles. The mouth is completely modelled with cupids' bows rather than merely suggested as in all other mosaics. Nose and eyebrow ridge are modelled by colored pebbles. Hair is unquestionably defined by soft contours and a few dangling wisps, in contrast to our charioteer's cap-like hair.

The surrounding floral ornament loops about in free scrolls and buds. They seem to anticipate the beautiful second century floral borders from Pergamon, <sup>63</sup>made in cut stones of a variety of colors. The Dyrrhachium vines are predominantly white, although colors are added to define the flowers. In turn they seem to represent a development from a pebble floor in Sikyon (not on display in the museum.) The arabesques there are two dimensional; their lay-out appears geometric in comparison to the Dyrrhachium vines. But many of the same motifs - the bud types, serrations at the juncture of stalk and offshoot, the rosette-type flower, appear in all three floors. The Sikyon mosaic is dated about 400 B.C. by Orlandos,

Praschniker compared the Dyrrachium mosaic to Apulian vases dating from the mid fourth century on, but believed that about fifty years elapsed between the Olympia pavement and his. Whether the more recent discoveries at Olynthos would revise his dating I do not know; the floor might be earlier as well as later than 300.

Pergamon  
V,1  
Pl.xxvll-  
XXXVIII

Eph.Arx.  
1941-4  
p.59  
fig.3

*Eph. Arx.*

The Dyrrachium mosaic certainly seems to represent a further development than our Piraeus floor; the Olympia floor is not as easy to compare with it, but the technique suggests that it too follows our quadriga.

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The other pebble mosaics need not concern us over much, since they provide few points of comparison with the Piraeus floor. The pebble technique seems to have developed in three directions after this period. Pebbles continued to be used for progressively simpler patterns of fish, floral ornament, and geometric design. A floor of this type from Olbia is dated in the third century from associated wall paintings. One in Tarsus represents the further degeneration of the technique in the late third or early second century. A pebble mosaic in the Athens gardens (fig. <sup>67</sup>) seems to be Roman; the sophisticated vines are made of larger, longer pebbles than the early floors, are laid in colors against a white background. Modern pebble floors like the courtyard of the Tinos church (which involves an elaborate flashy series of geometric panels culminating in Byzantine animals) and the humbler courtyard pavings in Skyros generally involve larger stones still. The Piraeus mosaic most certainly is to be grouped with the carefully executed floors of an earlier period rather than these later purely decorative pavements.

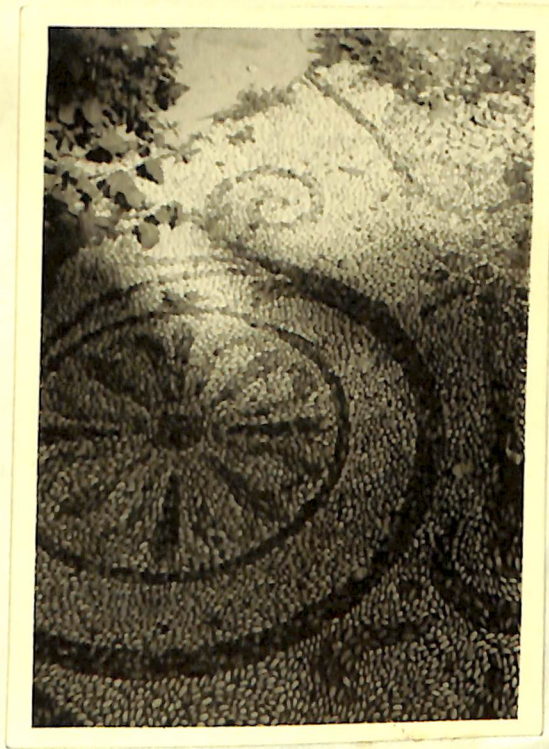
(2) A second direction in which pebble mosaics may have developed is indicated by floors in Alexandria. A warrior with upraised spear within a border of animals is executed in the cruder technique we have associated with the early representatives of the preceding group. Presumably it was executed after the founding of Alexandria in 331 B.C. Certainly it has little in common with the Piraeus floor, and seems later. (Provincial workmanship might account for the difference.) A pavement from Shiatby has been referred to as a pebble mosaic in several sources, but the Alexandria Museum recently issued a denial <sup>70</sup> that it contained more than one pebble mosaic, the hunter. The floor in question seems to be made up instead of roughly cut stones

loosely set. The general design, a central figure panel with a border of griffins, horses, etc., seems to be derived from the pebble mosaics. Other pavements in the Alexandria Museum seem to represent the degeneration of this rough technique. The Smyrna Museum contains mosaics in which large stones seem to be similarly 'floated' (I have not examined the Alexandria mosaics and am not certain the technique is identical.)

And the third line of development into tessellated mosaics proved significant. The contrast in spirit between the Olympia pavement and the two groups above mentioned indicates that the illusionist technique of the new method challenged the more adventurous mosaicists. Pebble technique was relegated to a minor place, and floors like those in Olynthos were henceforth decorated in tessellae. The Piraeus mosaic is definitely a major venture in the careful pebble technique of the fifth and fourth century floors; it cannot be relegated to Roman times or the preceding century or two unless further discoveries lead us to alter our views on the history of the technique. The white on dark silhouette, the relief-like rather than painting-like composition of the panel, the firm but reserved style, the masterly handling of the human figure would suggest that the mosaic is Greek rather than Roman even if the technique did not prove its classical date.

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We have examined the mosaics which can be seen in this vicinity in some detail in relationship to the Piraeus quadriga. We then tried to fit the Olynthos pavements into a chronological sequence after the Corinth and Sikyon floors and before the Piraeus mosaic. Some geographic distinctions seemed to distinguish northern and southern styles. We examined the fairly conclusive evidence that the colored pavements from Olympia and Dyrhachium followed the previous group and tried, perhaps rashly, to trace three lines of development stemming from the pebble tradition. We proved that the Piraeus mosaic could not be Roman, as it was originally characterized.



ATHENS,  
ROYAL GARDENS



