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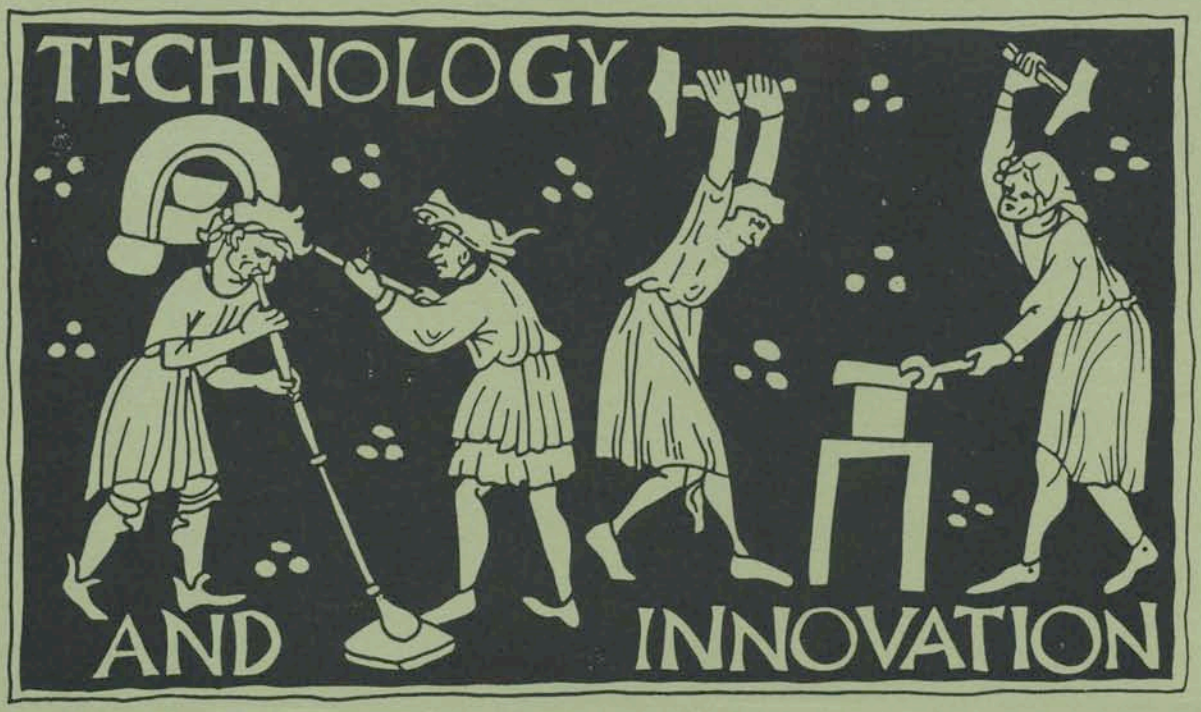

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The Quarter of the *Olliers* in Thirteenth Century Marseilles,
A transfer of technology

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The rescue excavation carried out from February to October 1991[1], in the Northern part of the medieval city of Marseilles, revealed *extra-muros* the vestiges of a whole district of potters. Until then, it was known of only from rare mentions made in archives, the most ancient of which is dated 1264[2]. These vestiges are located above an Antique cemetary and a late-antique level ; they were well preserved since the area has been covered only by gardens from the fifteenth century up to today. Preliminary study of stratigraphy, ceramology and numismatics situates the activity of the workshop as thirteenth century. However the site can be dated at least up to the beginning of the fourteenth century, during a period which the buildings were destroyed and then reconstructed to be used by smiths and coral craftsmen. The archaeometric analysis in progress will permit to clarify the chronology of these different states of the site.

For the first time in Provence an excavation has made it possible to visualize the organization of a potter's workshop located in an urban *milieu*[3] (Fig. 1). Real construction plots were created and developped perpendicular to the main street. These plots comprised buildings and uncovered passages. This marginal but strategic *extra-muros* area was apparently designed for the installation of craftsmen, placed in the vicinity of an important route and a city-gate leading to Aix in the North. A study of the archives should allow us to identify the patron.

This *peri-urban* workshop is the first example revealed by archaeological research in the South of France. If one includes this discovery in the general context of the well-known production of ceramics in Provence, from the early Middle Ages to the thirteenth century, the technological development is striking : the passage from the reducing fire (B mode) to the oxidizing fire (A mode), reappearance of calcareous clays, use of lead-glazes and tin-glazes and production of proto-majolicas.

As a matter of fact, since the seventh century the stamped-ware vessels obtained by calcareous clay and reducing fire have completely disappeared. These ceramics which originated in the Marseilles area and were widely produced during two centuries, are finally replaced by the cooking ceramics in coarse gray-ware (siliceous) issued from the workshops furher inland (Pelletier). Until the thirteenth century, these ceramics in coarse gray-ware made in forms of little variety, prevail over all the Western part of Provence. For the fire of this coarse gray-ware, the kilns (Saint-Victor des Oules type) found in Languedoc, as well as in Provence are generally circular with vertical fire ways and a perforated hearth which is almost always obtained in the substratum. The dimensions and materials of construction of the kilns are greatly diversified for multiple reasons, such as the chronology, the importance and duration of the workshop, as well as the availability of clay in situ. For instance, some late kilns (thirteenth century) are well-known in the Northern countries though their plan is different : kilns with "a tongue" and a semi-vertical fire way, with or without a hearth on either side.

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1 Preliminary *sondages* made by F. Moliner et F. Cognard, archaelogists of the *Atelier du Patrimoine* of Marseilles. Supervision of the excavation : M. Moliner. Scientific supervision of the Mediaeval section : the authors.

2 Researche by H. Amouric

3 A preliminary study has been communicated in Rabat in November 1991 (Marchesi).

In Marseilles, the constructions brought to light are innovatory. The kilns used to fire the vessels are of a new type, until then unknown in Provence[4] : they consist of circular kilns furnished with a central pillar and radiant arches supporting the hearth of the furnace. This is the main of types ; their diametre is small (1,4 to 1,8m) and the materials used for their construction evolve chronologically : they were built firstly at the level of the latest occupations (S 89, S 98, S 103, S 107), or were coated with calcareous stones (S 118) and then constructed with unfired bricks (S 70, S 93). Their aspect is also diversified and answers to the transformation of the workshop, although the axes of circulation are preserved. The repaired wall of one of the kilns (S 107) is furnished with peculiar vertical flutings.

Another circular kiln is provided with a vertical fire way and transversal arches supporting the hearth (S 12 : second state) ; it is the only example known in Marseilles. In fact, this is the result of the transformation of particular kiln (see the next kiln). This type of kiln with transversal arches inscribed in a circle is only known by a unique rudimentary example in Saint-Gilles-du-Gard in the South of France, at the end of the thirteenth and the beginning of the fourteenth century, (Thiriot 1975). It is well known in other regions but is inscribed in a square or in a right angle...

Meanwhile the most outstanding innovation is a type of kiln furnished with bars which has been found for the first time in France. On the other hand it is archaeologically known in Spain, Sicily, North Africa and in the Middle-East where, in view of the quantity of bars in the furnace seen in numerous sites, it seems to have been used widely. The original kiln (S 12 before the erection of the transversal arches) is furnished with a vertical fire way and is without a hearth ; its diametre is 2m. Its vertical wall has been repaired a couple of times and has been provided with several lines of holes spaced out regularly at 30cm intervals. These holes were intended to receive bars of 40cm long and a maximum diametre of 5cm. They are made of fired clay and are thinned cut at the ends in order to be fixed into the wall ; a kind of wheel-shaped shelf is then obtained on which the vessels are placed to be fired. This technology is of Islamic origin and can be seen from the tenth century on, in the entire Mediterranean basin. Recently, the excavations in Balaguer (Giralt 1991) and in Zaragoza (Mostalac 1990) in Spain brought to light kilns of the same type. They are exceptionally well preserved and consequently is easy to envisage the reconstruction of the kiln discoved in Marseilles. The latter is the most northern example of this type known to date. However, we do not know if this type of kiln is the only one in the Marseilles workshop.

A further innovation in Marseilles is the presence of kilns of small dimension used for the preparation of glazes (metallic oxides or frit ?). Their identification poses several problems since we are devoid of any results of the analysis of collected wastes. We know of no other similar example in the whole of the medieval Mediterranian area. These ruined constructions are not easy to reconstruct. One of them (S 99), though it may be compared to the kilns for the preparation of metallic oxides illustrated by ancient encyclopaedias and treatises on ceramics (Piccolpasso and Diderot), or known, but differently organised, by the recent Maghrebi craft industry, is of a totally new shape. The most important one (S 110 : 1,40m long X 0, 90m large), is a real reduced model of the kilns furnished with traditionnal parallel arches discovered in Denia in Spain (Gisbert 1991) the use of which remains problematic. There is a link between the smaller circular kiln (S 116 : diametre about 30cm) and small holes in the ground, or subsidiary constructions, one of them a ground basin (*lébrillo*) filled with foam of fired lead-oxide necessary for the compounding of glaze.

The corpus of the vessels included unexpected forms. The ceramics produced in the workshop of Marseilles are fired by oxidizing (A mode). The most ancient levels of the workshop bear witness to a simultaneous use of at least two types of

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[4] A kiln of this type was found in Beziers in 1990. It is dated to the 13th century and it has been used for reducing fire (Lecuyer) : the central pillar it means is a transformation of a more classic kiln provided with a hearth of the Saint-Victor-des-Oules type.

clay. A tile-red one which is of a coarse texture was prefered for the fashioning of cooking pots ; they are, mainly, tin-glazed (closed-handled forms, casseroles, dishes, lids, but also stills, lamps, jugs and large bowls)[5]. The origin of this clay remains unknown and it was probably abandoned in favor of calcareous clay. The composition of the latter is, according to the first geochemical analysis carried out by Mr Picon, comparable to the one used by the potters of Marseilles in the Antiquity. The analysis in progress, in the *Laboratoire de Céramologie* of Lyon, of the composition of this most common clay will allow us to determine the different varieties of clays used for the cooking dishes and the utilitary table-vessels, during the period in which the workshop was in activity .

The most important innovation consists in the variety of forms produced in calcareous clay (vessels, jars, large bowls, flower pots, money-boxes, water pipe-lines, lamps etc.), and in tin-glazed, as well as in the first proto-maiolicas decorated in green and brown. All of these forms are new in Provence and recall the ceramics of the Mediterranean, for instance those of the *Al Andalus* (Rosello Bordoy 1991, Amigues 1987, Navaro 1991) and those of the Siculo-Maghrebi area (Ragona 1979-1982). The fill of the kiln S 107, the analysis of which is in progress, provides an idea of the vessels produced by the first potters. There are exactly as many ceramics in calcareous clay as in red-glazed clay (cooking dishes). 28% of these vessels are unglazed, although some forms are opaque tin-glazed or antimony-glazed (analysis in progress). In each case, the close handled forms of jugs and pitchers are in monochromy except two zoomorphic spouts and handles decorated in green and brown : they recall the andalusian *aguamanils*. On the other hand, the open forms such as dishes, bowls and plates with anular foot, are few in number ; all of them are decorated in green and brown and sometimes in yellow (Fig. 3). But if one observes a specific style and some permanent features the patterns are hard to see on the wastes of sherds. Geometric patterns (waves, triangles, quatrilateral crosses) can be found on the the rims and framing rosettes or zoomorphic patterns such as fish and birds...). In the same kiln are found also painted tiles : they are of a small module (12,5 cm, thickness : 1,3 cm) and decorated with green and brown rosettes of the same style as those seen on the vessels (Fig. 2). These decorated tin-glazed tiles are in the present state of the research the most ancient examples known in the North-West Europe, since the decorated tiles found in the district of Toulouse in Narbonne are dated to the last decade of the thirteenth century (Norton 1984).

Meanwhile, some other architectural vessels and majolicas had been produced in the Marseilles workshop before it was abandoned. The fill of the kiln S 83 delivered a series of tiles of different module and shape. They are of bigger size (15 cm, thickness 1, 8 cm) and made in monochromy -white tin-glazed or manganese brown. A few examples are painted in green and brown, sometimes in yellow, and decorated with geometric and zoomorphic patterns, for instance eagles turning right with spread wings. In both cases, the style and patterns of the tiles produced in the Marseilles Sainte-Barbe workshop are quite different from those discovered in the pontifical castles and dwellings coming from the Avignon and Uzège workshops during the fourteenth century (Gagnière 1963-1964). Were they not they the subject of an aristocratic patronage, as in Northern France ?

This transfer of technology illustrated by the discovery of the Marseilles workshop has been already suggested by the study of the ceramics found in the *castrum* of Rougiers (Var district). In Provence, the first maiolicas are presented in small quantities by the middle of the thirteenth century and during the first half of the fourteenth century (Démians 1980). The geochemical analysis of clays proves that they are quite different from the Avignon maiolicas in the fourteenth century and those from Languedoc in the late thirteenth century (Vallauri 1980, Broecker 1982). One should note

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[5] Study in progress by M. Leenhardt.

that the latter are similar to the most recent productions in Marseilles. On the other hand the presence of lead-glazed kaolinitic cooking vessels in the last strata of the potter's occupation, there, testifies to the same innovation as was seen in Languedoc, where there was the greatest workshops in the South of France : Uzège (Saint-Quentin-la-Poterie and, particularly Saint-Victor-des-Oules). This workshop, specialing in cooking lead-glazed vessels, produced perhaps maiolicas and tiles. It is not impossible that during the thirteenth century the production of proto-maiolicas had been experienced in different areas in the South of France. A similar phenomenon has just been found in Liguria : the petrographic analysis of clays bears witness to Sicilian proto-maiolica imitations of the Gela type in the first quarter of the thirteenth century in Castel Delfino (Milanese 1982) Probably these copies originated in Savona or Albisola where Sicilian craftsmen had been established.

In Marseilles the origin of the potters is problematic. They came with a proper know-how and with an innovating technology during the countal period in the reign of Charles I d'Anjou. However the evidence of a kiln provided with bars, as well as of the Islamic features of the corpus of the ceramics, e.g. coarse gray tin-glazed and lead-glazed vessels, suggest both that the craftsmen came either from the southern Spain, or from the Siculo-Maghrebi area. The excavation carried out in Sainte-Barbe in Marseilles revealed an unexpected exchange of knowledge in the vessels industry which is of major importance in the historiography of ceramics. Marseilles was from then on one of the most ancient places of production of maiolicas and tile-maiolicas, a technique which the craftsmen was to master to perfection throughout fourteenth century.

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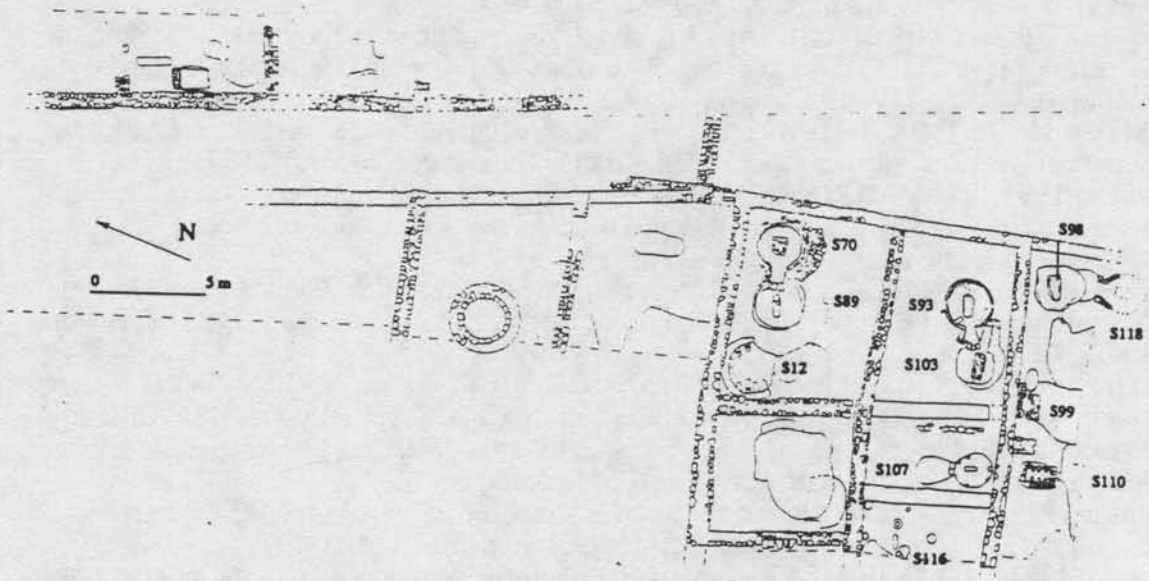

Fig. 1: The suburb of the potters brought in light in Marseilles, with the kilns in the south part.

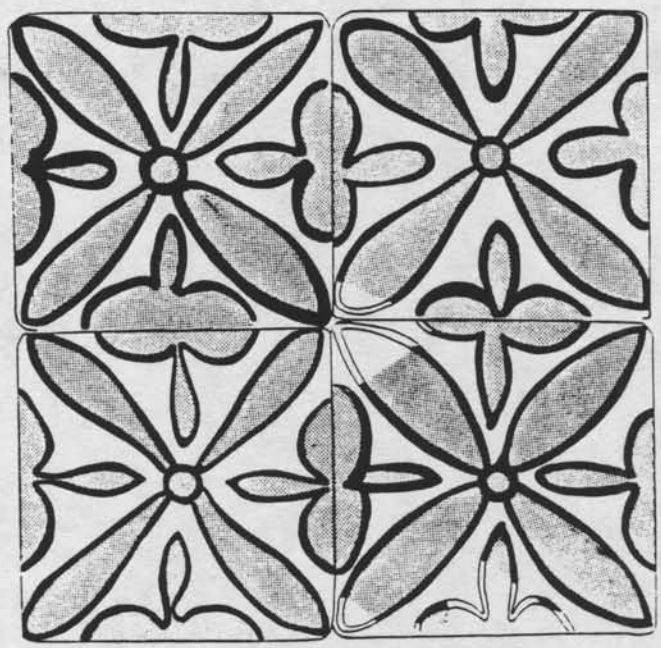

Fig. 2: Tin-glazed tiles issued from the kiln S.107.

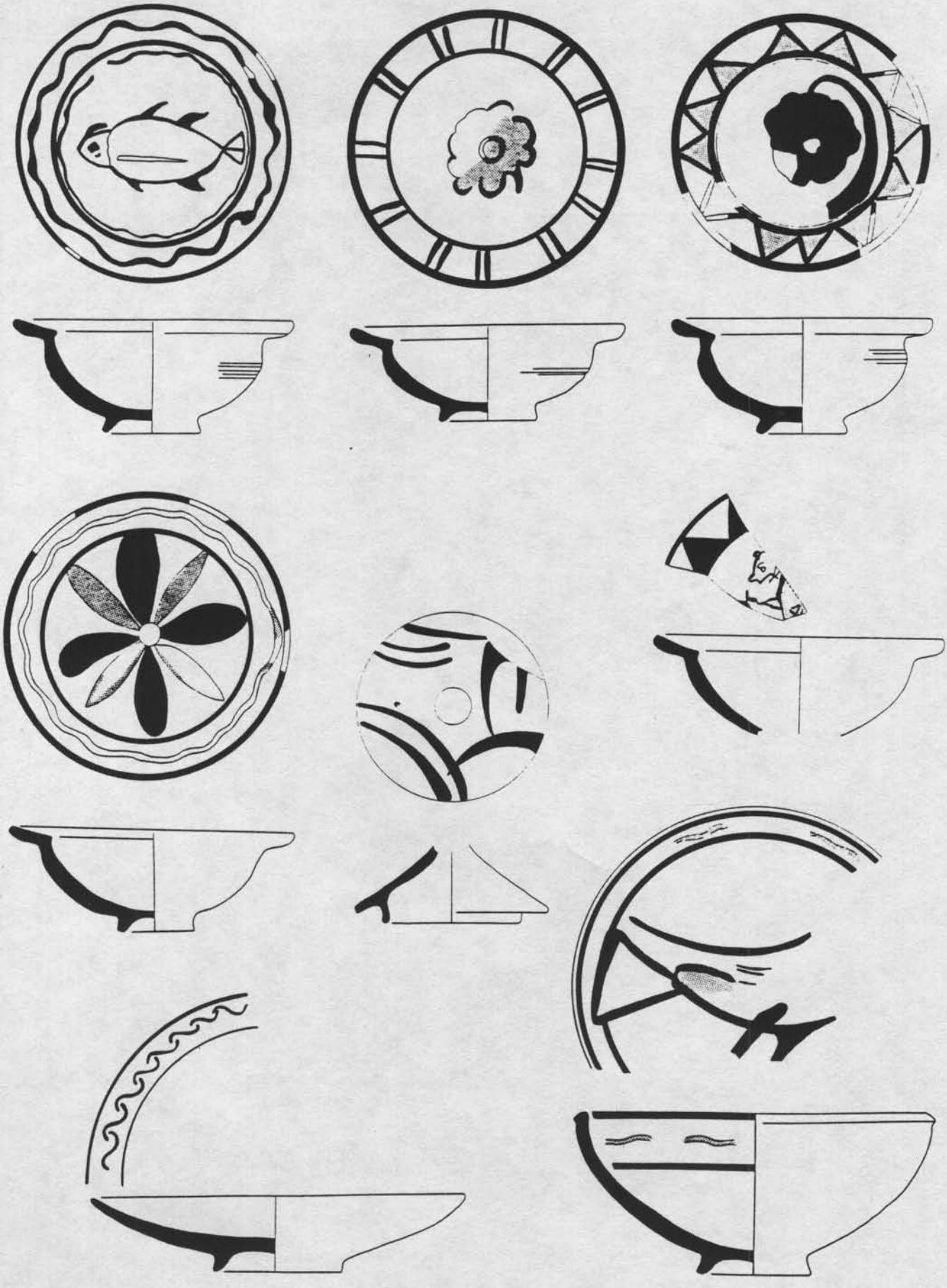

Fig. 3: Vessels proto-majolica (bolws, dishes, lid) issued from the kiln S.107.