

Michael Maass, *Die geometrischen DreifüÙe von Olympia*. *Olympische Forschungen* 10. Verlag Walter de Gruyter, Berlin 1978. 247 Seiten, 67 Tafeln, 20 Beilagen.

This volume is the third major publication of Geometric tripod-cauldrons from Olympia, following in the wake of A. Furtwängler, *Olympia* 4 (1890) 75 ff. and F. Willemssen, *Olympische Forsch.* 3 (1957). Although the author's main purpose is to publish the abundant new finds made subsequent to Willemssen's study, he wisely reconsiders the outstanding pieces from earlier excavations as landmarks in his general account of the development of style and technique. Since his plates do not overlap much with those of Willemssen, the reader must always have the earlier volume at hand; but indispensable guidance is provided by a full catalogue raisonné for all pieces discussed, the first ever to appear in any publication of the cauldrons since Furtwängler. This excellent catalogue is a considerable achievement in itself, many of its items recording the author's remarkable success in diagnosing parts of the same vessel from the disiecta membra of legs and handles, using every possible criterion of size, style, technique, and context. One of the most impressive fruits of Maass' research is the vast tripod cauldron of the hammered class, completely restored from fragments, which today's visitors to Olympia see at the entrance to the new museum.

So acute are the problems of classification that no two specialists have yet agreed on the categories into which the tripod-cauldrons should ideally be divided, but the system of Maass is among the most objective and the least arbitrary. In successive chapters he presents and discusses his four classes of which the first three are cast: I, those with massive sections on legs and handles; II, those with relief decoration, whether applied or moulded; and III, those with stepped ridges. Then follows IV, the hammered class, and finally a discussion of chronology and regional schools. Miniature tripods and those with iron parts, virtually neglected since the days of Furtwängler, are considered in the Appendices, which conclude with remarks on ancient repairs, and a few metallurgical observations by G. Varufakis. The catalogue is followed by a chronological chart and a concordance listing all pieces discussed, whether from Olympia or from other sites. It is a great service to the reader that the list for Delphi could include the publication numbers in C. Rolley's subsequent volume *Fouilles de Delphes* 5, 3. *Les trépieds à cuve clouée* (1977), which appeared three years after Maass' manuscript had gone to press.

To find a *terminus post quem* for the beginning of the massive class, the author considers the only complete forerunner, Stais' tripod from Mycenae. Its resemblance to the clay models from the Kerameikos inclines him to place it in the Protogeometric period; but the provenance makes a Mycenaean date more likely, and comparable leg fragments have recently been published from the Orchomenos hoard (cf. Rolley, *op. cit.*, 109 figs. 31–32). Indeed, it is hard to visualise any tripod-cauldrons being made during the greater part of the Protogeometric period, when bronze was so scarce in Greece that iron was used as a makeshift even for pins and fibulae. The clay miniatures from the Kerameikos could well be following an older metal form when the metal was no longer available. Although the author rightly emphasizes the structural differences between the Mycenae tripod and the earliest from Olympia, the chronological gap between the two types may be much greater than he supposes.

Thanks to copious recent finds, much new light is thrown on the early massive class. Dispensing with Willemssen's needlessly numerous subdivisions according to leg and handle sections, Maass traces a single and clear line of development which progresses not only through the gradual hollowing of sections, but also through the increasing ratio of leg height and ring-handle diameter to basin rim diameter. In these respects B 1240 (erroneously titled 'I' at the bottom of pl. 1, but not to be confused with the 'I' of Maass' catalogue [B 4223]) the well-known complete vessel from previous excavations, has its successors in the substantial new fragments catalogued here as nos. 2 and 5, which preserve valuable associations between legs and handles.

Between the author's first and second classes there is bound to be some overlap, distinguished as they are by section and decoration respectively; thus a few conservatively massive pieces with relief decoration (including some fine ringhandles like Br 5471, Willemssen pl. 30, bearing an early horse) are reasonably set aside from the main development. Otherwise the second class is seen to evolve naturally out of the first, the leg sections eventually settling down to the metal-saving Pi form of the later classes. The internal development of class II is worked out with great precision, thanks to a technical landmark within the series which had hardly been noticed in previous studies: the change from applied to moulded relief decoration. These

relief pieces had previously been separated by Schweitzer (*Die geom. Kunst Griechenlands* [1969] 187 ff.) on aesthetic rather than technical grounds into two overlapping types: 'heavily cast with spiral ornament', and 'classic Geometric style'. Maass, however, convincingly presents all relief ornament in a single series, tracing the gradual transition from applied to moulded decoration which was to make Schweitzer's 'classic Geometric' type possible: this transition is marked by the legs in a mixed technique (nos. 105–110) where the designs applied to the front are reproduced on the sides by means of moulds. An analogous sequence is observed among the handles, some of which are here securely associated with legs through the detection of identical moulds used to decorate their vertical straps. As for the handle rings, both openwork and ribbed forms are found to persist as alternatives all through this series; the ribbed group is rightly dissociated from class III (where Willemsen had put it) on grounds of profile, modest size, and consistency in the style of the horses attached to both forms of handle. The tentative attribution of class II to Argos, suggested in previous studies on the strength of similar finds from the Argive Heraion, might here receive some support from the horse and zigzag panel on no. 116, corresponding to a typical formula of Argive Late Geometric vase-painting.

Maass' third class, not very numerous, is distinguished by the stepped profile of the leg sections, and the absence of any relief ornament (apart from the exceptional figured scene on no. 179). Two new reconstructions receive their first publication here: no. 177 in corpore but minus the handles, and of modest size; and no. 176, restored on paper, and with a height of 1,70 m the largest known of all cast vessels. The derivation of this class remains obscure. Having no roots in class II, these vessels must have been manufactured in a different centre. Corinth has been suggested, the only other known provenances being Delphi and Ithaca. The ring handles regularly have rivet holes for the attachment of horses; the author assigns to this class three large horses (one with rider) of suitably Corinthian appearance, although none has yet been found in situ.

Furtwängler's well-known paper reconstruction of a hammered tripod-cauldron (here class IV), so often reproduced in handbooks, had long been in need of revision; based on the smaller and earlier types, it took account neither of the incurving basin rim apparent in the upper leg profiles, nor of the much larger scale of the ring handles in relation to the rim diameter of the vessel. No. 201, the fine new in corpore restoration mentioned above, not only rectifies these errors but also provides a fascinating insight into the laborious processes involved in constructing these huge vessels (Maass' account of how the various parts were assembled, lucid though it is, might have been clarified even further by a few photographs of work in progress). Especially time-consuming was the endless punching of decoration – false spirals, zigzags, and the like – on the hammered plates of the legs and the ring-handles, but it is interesting to note that the punches helped greatly to harden the metal. As with the moulded relief of class II, close scrutiny of the punched designs enables the author to recover associations between handles and legs. He also succeeds in working out a plausible sequence in the general ensemble of linear ornament, consistent with the stylistic development of the three horse figurines still in situ on ring handles. Comparison with the horses, ring-handles, and legs from the Acropolis confirms the view, now rapidly gaining ground, that the main workshop for the production of the hammered class was staffed by Athenians.

More problematic is the regional assignment of the human attachments – the horse-masters and the ring-holders – partly because so few have been found in situ, and partly owing to a greater variation of style than is the case with the horses. For example: acceptance of the fine horse-master no. 299 (B 24) as Attic leads the author to reject an Attic origin (as suggested by Schweitzer) for no. 318, the celebrated pair of ring-holders consisting of the lively youth Athens 6179 and the Minotaur in the Louvre. Schweitzer's argument, however, was securely based on the presence of a similar though later Minotaur among the Acropolis finds; and perhaps it is unreasonable to expect the Late Geometric bronzesmiths of Athens to display any greater unity of figure style than contemporary Attic vase-painters.

The final chapter, on chronology and regional distinctions, might have been more instructive if these two themes had been treated separately. In fact, nothing is added to the regional observations made in previous chapters, in which Maass on the whole follows M. Weber (*Athen. Mitt.* 86, 1971, 13 ff.) in associating class II with Argos, III with Corinth, and IV with Athens. For the chronology, possible links with the ceramic sequence are explored, and for the most part found unpromising. Most correspondences with horse and human figures in vase-painting are too generic to be helpful; painted representations of tripod-cauldrons

are too roughly drawn (although one might perhaps identify an openwork ring-handle on the potsherd from the Argive Heraion: S. Benton, *Annual Brit. School Athens* 35, 1934–1935, 105 no. 13 pl. 26.2); clay copies of the vessels may be closer to the originals, but are themselves hard to date precisely in relation to the local pottery style. So the author wisely concentrates his attention on the only closely comparable sequence in pottery, i. e. the horse figurines on Attic pyxis lids. He makes useful comparisons between the early pyxis horses (MG II in the reviewer's system) with those of the early handles of class II; but also worth noting is the regional similarity between the later pyxis horses (LG I) and those of class IV, both media displaying what is perhaps a typically Attic interest in marking the harness. For his absolute chronology the author thinks that the reviewer has allotted too little time to the Dipylon Workshop and prefers the higher dating of Kahane, but without following it through for non-Attic pottery; thus Kahane would surely have placed the Argive krater fragment C 240 in his 'reif' phase of c. 800–750, but here the latest horse of class II to which it is compared is dated to c. 750–725 (pp. 106–07 on no. 173). Consequently the reviewer finds himself in general agreement with the author's eighth-century dates (p. 228), without being persuaded that the development of class I requires the whole of the ninth century.

In conclusion, the author deserves our congratulations for achieving the clearest and most convincing exposition to date of the Olympian tripod-cauldrons. This he has accomplished by examining all possible criteria – shapes of legs and handles, decoration, technique, style of horse and human attachments, basin profile, proportions of leg height and handle diameter to basin diameter – in order to follow the development within each class, and the chronological connections between them. Thanks to his work, following so soon after Rolley's recent volume on Delphi, we are now given a synoptic view of the most monumental offerings at the leading sanctuaries of Geometric Greece.

Bedford College, London

John N. Coldstream