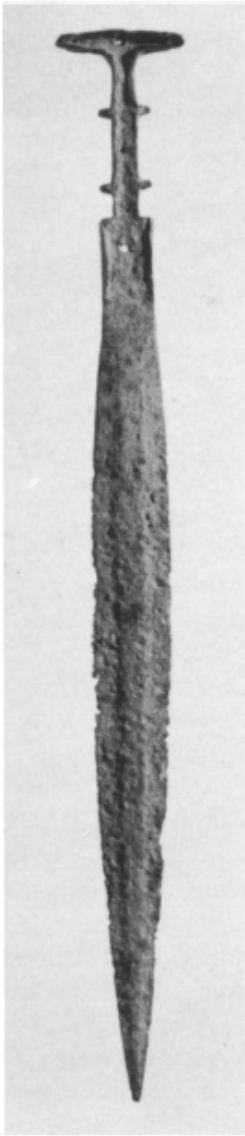




Oscar White Muscarella

BRONZE AND IRON

Ancient Near Eastern
Artifacts
in The Metropolitan
Museum of Art



302

302. Sword

62.40.1; Gift of Jerome M. Eisenberg, 1962
Iron; length 51 cm

THE HILT and blade are made in one piece. The blade tapers out just below the guard area and at midpoint tapers in toward the sharp tip, willow leaf in form; there is a broad midrib. The flattened hilt and pommel form a T shape; both are hollow to receive an inlay. Two sets of protuberances divide the hilt to form a grip; rivet holes exist in the pommel, on the hilt between the protuberances, and just below the guard.

Vanden Berghe's excavations in Luristan have yielded several swords of the same or closely related forms as the example here. All are also made of iron and all have the same pommel form and the hilt with protuberances. They derive from three sites, War Kabud (vanden Berghe

1967, 56 left; 1968b, pl. 27b), Gul Khanan Murdah (vanden Berghe 1980, figs. 18, 19, 20:11), and Bard-i Bal (vanden Berghe 1973a, fig. 8, pl. xxiv:3). All are from Iron III contexts, about eighth–seventh centuries B.C. (the Bard-i Bal examples may be the earliest). Our sword may thus be attributed to Luristan where it was probably made sometime between the late eighth and perhaps the mid-seventh century B.C.

Maxwell-Hyslop and Hodges, in their discussion of unexcavated swords of the same or similar form as this example (1966, 164ff., pl. XLIX:3, 4, 6), correctly connected these swords typologically to a very elaborate and distinct form, or subtype, that is embellished with human heads and crouching lions (see No. 303); Calmeyer (1969a, 127) and Moorey (1971a, 317) also noted the interrelationship. It would seem that sometime during the lifetime of the simple form the embellished examples were conceived and made, but that both subtypes were contemporary thereafter.

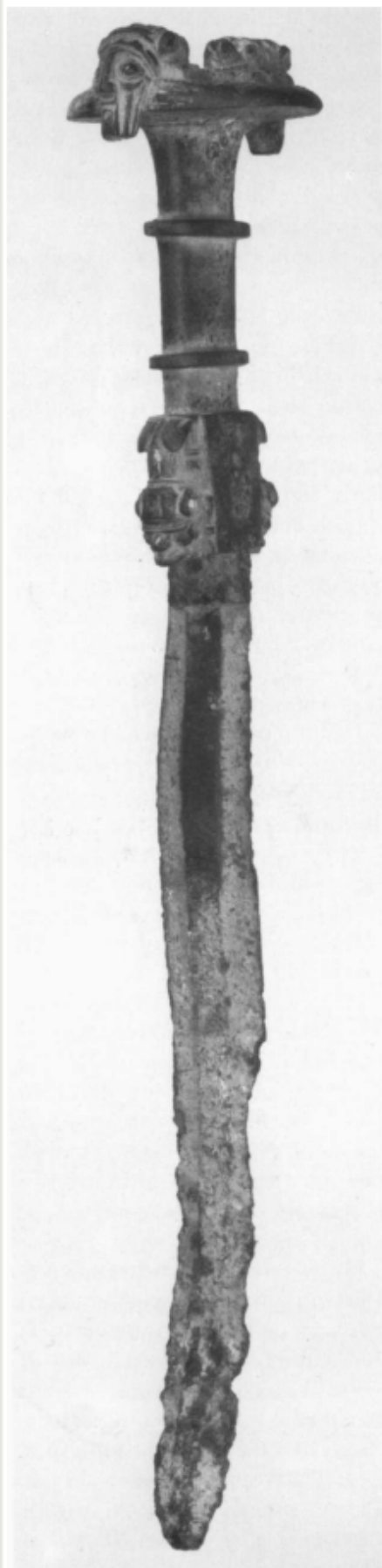
Working without benefit of excavated finds, and on the basis of comparisons with flanged daggers of another type, Maxwell-Hyslop and Hodges (1966, 172f.) dated both the plain sword and the embellished examples to the eleventh century B.C. (on page 174 they speak of the eleventh–tenth centuries, while on page 175 they discuss a seventh-century date but reject it). This date is too early by centuries, as shown by excavations. Nor is there any indication that iron was used before the late ninth century B.C. in Iran (Pigott 1980), nor in Luristan before Iron III, eighth–seventh century B.C.

303. Multi-Piece Iron Sword

61.62; Purchase, H. Dunscombe Colt Gift, 1961
Iron; length 50.1 cm

THE SWORD is complete except for corrosion and minor damage to the blade. It belongs to a well-known class that has been described and discussed many times; the present example was first published by Kate Lefferts (1964, 59ff.). The blade is placed at right angles to the hilt and has a broad, flat midrib running the whole length; it flares slightly from the ricasso and then tapers toward the tip, willow-leaf shaped. The most distinctive characteristic of the weapon is the hilt: it is rectangular in section and divided into three areas by two raised rings. The pommel is a flat disk embellished on opposite sides with two bearded male heads facing out and parallel to the face of the blade; at the back of each head, and apparently one piece with it, is the forepart of a lion with its paws outstretched on the pommel. Each human head has round, bulging, outlined eyes, a prominent sloping

303



Hilt of No. 303.



Detail of guard on No. 303.



Pommel of No. 303.

nose, a small horizontal mouth set within a beard formed in layers and terminating in a straight line; hair divided into small lumps is visible over the forehead. The lions also have bulging outlined eyes and the same hair pattern noted on the human heads; the mouths are closed. A three-stepped flange exists at the join of the pommel to the hilt. The guard is rectangular and on each wide side, parallel to the face of the blade, is a couchant lion facing the blade; they are plastically rendered and decorated by incisions. The ricasso is formed of two sections, the lower incised in a chevron pattern. The hilt is further embellished with sixty-four carnelian inlays (mistakenly called agate in Ternbach 1964, 49): nine are placed in each of the couchant lions, twenty-one in each of the human heads and lion foreparts, and four on the pommel flanking the heads (one is now missing).

Technologically, swords of this class represent a remarkable accomplishment of the ancient craftsman for they are one of the most complex weapon types known from antiquity; as such, they have been of interest both to archaeologists and to historians of ancient technology. On macroscopic examination alone one has the impression that they were made in one piece, the intent, no doubt, of the craftsmen. However, both X-ray and careful laboratory examination of many examples have demonstrated that all the swords were in fact constructed from a number of units, varying in quantity from sword to sword. Thus, the example in the Metropolitan Museum "was made in nine, ten, or eleven parts, depending on whether the ricasso is separate and if so, whether it was made in one or two parts" (Lefferts 1964, 60): the blade and hilt are made of two units, the blade inserted into a split in the hilt; the two rings on the hilt were added; the disk pommel was added to a tang on the hilt and a flange added to mask the join; the two human heads and lion foreparts and the couchant lions were added to the pommel and the guard. All the added units were tightly and invisibly fitted into prepared grooves and locked into place by crimping or pushing back the edges of the grooves; some heating may have been employed. Although no rivets are evident on the Metropolitan Museum's sword or on some others (Maxwell-Hyslop and Hodges 1966, fig. 2; C. S. Smith 1971, fig. 2:28; F. Hummel 1977, 126, fig. 1; France-Lanord 1969, 92, 93, 103f.), several definitely preserve them to join the various units (Naumann in Maryon et al. 1961, 181; Bird and Hodges 1968, 218; France-Lanord 1969, 96, 98, fig. 13). And while some (most?) swords were constructed with the hilt and blade in one piece, several examples are known in which they are made separately and joined together by a rivet (Naumann in Maryon et al. 1961, 181; France-Lanord 1969, 98, fig. 13).

Other swords have been recorded as having been made of eight, nine, eleven, and even fifteen pieces. The number of hilt rings, rivets, and whether or not the blade and hilt are made in one piece determine the number of units recorded. After assembly, details were incised and apparently polished.

Of special interest is the fact that, unlike other swords and daggers known from antiquity, including the closely related No. 302, all the blades on the multi-piece swords are attached to the hilt at a ninety-degree turn, a feature that puzzles scholars (viz. A. Godard 1931, 40; Potratz 1955a, 187). To explain this anomaly Damien (1962, 30f., fig. 8a-d) suggested that the blade position indicates that the sword could have functioned as both a weapon and a tool; Pleiner (1969a, 33; 1969b, 46), on the other hand, sees the swords as symbols. Others have postulated that the hilt might have had an inlaid section

that would have facilitated a conventional grip (Spence and Needler 1955, 15; Maxwell-Hyslop and Hodges 1966, 168).

Laboratory examinations have demonstrated that each sword and its added units were hand forged and not cast, although molds were probably used as forms for the details (Moorey 1971a, 318, for a summary). That each sword was individually handcrafted is indicated by the fact that although all the attributes are very close in appearance and conform to a single design, no two seem to be alike in all details, in blade and hilt sizes and shapes, in weight, or in the sizes and proportions of the component units (Spence and Needler 1955, 15; Maryon et al. 1961, 175, 182; Damien 1962, 25ff.; Lefferts 1964, 59f.; Ternbach 1964, 47ff.; France-Lanord 1969, 78, 82); and some swords seem to have been made without lions on the guard (Nagel 1963, no. 29; Ternbach 1964, pl. XIII:5).

The problem concerning the specific composition of the metal has caused much debate, some of it contradictory. For although it is proper to refer to the material as wrought iron (i.e., not cast), it has been demonstrated that at least in some cases carbon exists, indicating to some scholars that the weapons are technically steel. Bird and Hodges (1968, 215ff.) and France-Lanord (1969, 86ff., 90, 105), however, have vigorously rejected these conclusions, maintaining that the presence of carbon is accidental, that it was not consciously added; to them the swords are not steel but forged iron (see also Pigott 1980, 448, and No. 302 above).

Not a single one of the approximately eighty-eight swords of the multi-piece class presently known to me has been excavated; all derive from clandestine digging (most, if not all, probably came from graves).¹ Most scholars have assumed that the swords derive from Luristan (A. Godard 1931, 317; Spence and Needler 1955, 18f.; Damien 1962, 17f.; Maleki 1964, 17f.; Lefferts 1964, 59ff.; Pleiner 1969a, 34; Pleiner 1969b, 41, 46; Moorey 1981, 105). Only three scholars to my knowledge have argued for a non-Iranian origin. Herzfeld (1941, 135ff., 166f.) argued that the swords "are indeed a foreign element among the Luristan bronzes," and that the sword in the Khanenko collection in Kiev published as deriving from the Pontus area of the Black Sea actually came from there, and, further, that this area "must be the original provenance of them all"; the Pontus attribution was supported by Maryon (1961, 174) and Ghirshman (1983, 71, 73). Pleiner (1969a, 29, 33; 1969b, 41, 46) accepted only the Khanenko sword as deriving from outside Iran. Ghirshman (1983, 29, 51f., 71f., 73f., 77, 84f.) asserted, but did not demonstrate, that all the examples were imported to Luristan from Cappadocia in antiquity.²

Evidence for a conclusion that the multi-piece swords



Detail of join of pommel and hilt on No. 303.



Ricasso of No. 303.

derived from Luristan manifests itself primarily from examination of the typology of the swords' basic features, the hilt and blade, and secondarily from the existence of stylistic parallels for the protome heads and couchant lions. Maxwell-Hyslop and Hodges (1966, 167ff.), Calmeyer (1969a, 127), and Moorey (1971a, 317) have perceptively called attention to the close typological relationship of the multi-piece swords to those plain iron examples that have willow-leaf-shaped blades with a broad midrib, a narrow hilt either flanged with protuberances for gripping or solid with raised rings, and a concave or flat pommel. This information has been presented in the discussion of sword No. 302; it was also

noted in that discussion that several of these iron swords have been excavated in Luristan. There is yet another closely related class of excavated swords from Luristan that has a direct bearing on the problem of origin of the multi-piece class. At the eighth–seventh-century sites of War Kabud, Tutalban, and Chamzhi-Mumah, vanden Berghe (1967, 56, right; 1971a, 265; 1975a, 357, fig. 6; 1977a, 63) excavated iron swords with rectangular solid hilts and raised rings, curved horizontal pommels, and willow-leaf-shaped blades. Except for the lack of the protomes and the lions, and, of course, the position of the blade relative to the hilt, these swords are typologically close to the embellished swords (France-Lanord 1969, 84). There can be little doubt that the multi-piece swords derived from the same cultural milieu as the excavated swords, and that they are a modification, although not necessarily a later development.

The most prominent parallel with respect to the bearded-head protome's eyes, nose, mouth, and beard is a statuette cited by Moorey (1971a, 318) and first published by A. Godard (1938, 233f., figs. 145–50); although unexcavated, it is accepted by most scholars as coming from Luristan ("Pusht-i Kuh": Calmeyer 1969a, 127, 143, fig. 133; Moorey 1971a, 318; Moorey 1971b, 117; Amiet 1976, 32). I believe that the Luristan attribution (certainly western Iran in general) is correct: all the features of the face are matched by typical Luristan figures (especially A. Godard 1931, pl. LVI:204; Moorey 1971a, no. 186); and the sword worn in the figure's belt is exactly the same in all details as the iron ones excavated at War Kabud and Chamzhi-Mumah, mentioned above (vanden Berghe 1968b, 124; Calmeyer 1969a, 127, 147).

Another statuette, now in the Schimmel collection (Harper in Muscarella 1974a, no. 146), is also a relevant parallel; it relates directly to the aforementioned statuette in facial features and the sword worn in the belt and less directly to the facial features of the heads on the pommels of the multi-piece swords.³ There can be little doubt about the Iranian background and origin of the Schimmel statuette. Finally, in this context one should mention a bearded male protome on the rim of a faience vessel excavated by Schmidt at Surkh Dum in Luristan (Muscarella 1981b, 349, no. 31). To be sure, this head is not matched by all details of the heads on the sword pommels—the eyes, ears, and beard are different, but the large curved nose and small mouth, as well as the protome concept itself, are worthy of comment and are part of the evidence supporting the suggestion that the multi-piece swords fit into a Luristan background.

Moorey (1971a, 318) has called our attention to still another Iranian feature on the swords by noting that the couchant lions on the guard are a motif common in Iranian art (see also De Waele 1982, 38, 46, 53). We may

also cite, in addition to Moorey's examples, the Hasanlu lion pins (Nos. 42–50), which, in position if not in style, are the same as those on the swords (see also sword No. 388).

The fact that the swords are manufactured of iron—and are relatively common—indicates that they were produced sometime in the first millennium B.C. On the basis of the evidence given above, in particular the chronological evidence of the excavated iron swords, we may safely conclude that the multi-piece swords were manufactured sometime between the late ninth and the seventh centuries B.C., a date that conforms in general with those suggested by Spence and Needler (1955, 19), Potratz (1955a, 187f.), Damien (1962, 27), Pleiner (1969a, 34), Moorey (1971a, 318), Amiet (1976, 34), and Evrard-Derriks (1977–78, 40). A more precise date within this period may tentatively be obtained by focusing on the War Kabud and Chamzhi iron swords mentioned above, which may range from about 750 to 650 B.C. (as Pleiner 1969b, 47). I suggest that the multi-piece swords may also be assigned within this period, about 750–650 B.C. Furthermore, as has been noted by Maxwell-Hyslop and Hodges (1966, 173) and Moorey (1971a, 318), the homogeneity of all the swords of this class suggests that they must have been made within a relatively short period of time and by a limited number of craftsmen.⁴ Therefore, the suggested range of about 750–650 B.C. merely establishes chronological perimeters.

The exact number of multi-piece swords in existence is not absolutely known, given the possibility that unknown and unpublished examples may exist in dealers' shops and in collections. But that the number in existence is indeed fairly large is evident from the published examples, and we may thus conclude that, whatever the use of the swords, mass production existed. Over the years the published list of currently known examples has grown: in 1961 Maryon recorded twelve examples (with duplications). In 1964 Lefferts repeated Maryon's list and added more for a total of thirteen examples. Calmeyer (1969a, 127) cited Lefferts's thirteen examples and in note 408 claimed to have located seven more. In 1971 Moorey was able to list a total of thirty plus. Pleiner (1969b, 41) mentioned over thirty examples, a figure he raised to about forty in 1969a, 29, and suggested that there might be as many as one hundred known. Schumacher (1973, 97ff.) listed about thirty-four, to which F. Hummel (1977, 125, n. 2) added two more. Ghirshman, in 1983 (p. 73), knew only two dozen. There are in fact considerably more examples known, and with the cooperation of Louis vanden Berghe, I have been able to recognize eighty-eight (plus/minus) examples housed in various museums and private collections.⁵

NOTES

1. Collected in this group as multi-piece swords are those that have the protomes on the pommel and the lions on the ricasso and those that lack some or all of these additions. Nagel 1963, no. 29; Rexroth 1932, pl. 41:7; Maxwell-Hyslop and Hodges 1966, pl. 1, nos. 3, 4; Bird and Hodges 1968, figs. 1, 2: we are here concerned with a polythetic class (Clarke 1978, 36, 207f.). Because the modern history of plundering in Luristan suggests that graves were the primary target, it is assumed on this circumstantial evidence that all the swords derived from graves. Whether an individual burial contained only one sword is unknown.

2. P. Diba, in *Les Trésors de l'Iran et le vase en or des Mannéens* (Paris, 1965), 88f., n. 1, fig. 53b, mistakenly stated that the sword in the Royal Ontario Museum was excavated at Alaca Hüyük. Actually, she confused the figures of Maryon et al. 1961, pl. 65: fig. 1 is from Alaca Hüyük, fig. 6 is from the Royal Ontario Museum (Diba's fig. 53b).

3. One should parenthetically call attention to a bronze statuette in Minneapolis, M. C. Rueppel, "Bronze Sculpture from Ancient Persia," *Minneapolis Institute of Arts Bulletin* 4, 1, pt. 1 (1957), 1-3, cover illus.; Culican 1965, 131, pl. 66. I only know this piece from the photograph and hesitate to cite it: if it is genuine then it too should be brought into the discussion concerning Iranian statuettes with a sword at the belt. For another statuette, no doubt genuine, with a sword at its belt, see *Kunstschätze aus Iran* (Kunsthhaus, Zurich, 1962), no. 190, pl. 23.

4. If this chronological conclusion holds up, then we might conclude that each sword was made for a specific person and that they were not passed down to others to use. The individual variations in manufacture and the number and size of specific components suggest that more than one craftsman was involved. Because no examples were excavated, we do not know their geographical distribution. Nor do we know whether the swords were juxtaposed to objects that might reflect wealth or signs of rank when compared to other graves.

5. A longer version of this entry, with a catalogue of the eighty-eight (plus/minus) swords, is to be published in *Archaeologia Iranica et Orientalis Miscellanea in Honorem Louis Vanden Berghe* (Ghent, 1989).

304. Spiked Axehead

32.161.2; Gift of George D. Pratt, 1932
Bronze; length 19 cm

305. Spiked Axehead

32.161.3; Gift of George D. Pratt, 1932
Bronze; length 19 cm

THESE TWO axeheads are characterized primarily by the splayed flat blade set in the same plane as the socket, and by the spikes projecting from the rear of the socket. The latter is cylindrical and relatively short and is cast with moldings that continue as the spikes. The spikes of No. 305 are plain and blunt, those of No. 304 are in the form of animal heads (bears?). The blade springs at an oblique angle from the upper part of the socket—itsself set obliquely to the whole blade—and rises slightly above it; the top edge is almost horizontal to the tip, where it

curves sharply down and inward to form a long striking edge, and then curves upward where it narrows at the socket. No. 304 is distinguished by having a zoomorphic juncture: the blade issues from the mouth of an animal head set into the upper part of the socket.

This class of axehead is represented by a large corpus of examples, and it occurs in a number of forms or subtypes, with a variety of blade curves and socket angles and embellishments (see No. 306). At least two stray plain examples like No. 305 in blade form and socket angle bear twelfth-century B.C. inscriptions, one in Akkadian for an Elamite king and one in Babylonian (Dossin 1962, 157f., pls. XXIII:13, XXIV:14; Porada 1965, fig. 52; Porada 1979b, 142, n. 11; Calmeyer 1969a, 67, Group 33A', B', C', claims there are three separate axes). And an example with an uncommon narrow and moderately splayed blade, but with four typical spikes, was excavated in a thirteenth-century B.C. temple at Tchoga Zanbil (Ghirshman 1966, 100, pl. LIII:4—not inscribed, pace Medvedskaya 1982, 81). Until recently these examples were the sole evidence for dating the axes, but recent excavations in western Luristan have demonstrated that they had a longer life and a distribution outside of Elam. At two cemetery sites, Bard-i Bal and Kotal-i Gulgul, vanden Berghe (1970b, 10, 13; 1971c, 20f., 26, figs. 11, 13, 28; 1973a, 16, 24, 35, figs. 5, 11, 20, pls. XVII, XVIII:1; 1973c, 18, 22, 24, 25) excavated a number of examples. The sites are roughly contemporary, dated to about 1000-900 B.C. (vanden Berghe 1973f, 4), and indicate that the type existed for centuries after the inscribed examples were made. Another excavated example comes from Xatunban in eastern Luristan. In this the upper edge of the blade is extremely curved and the edge is horizontal, on a level parallel to the base of the socket; its date is unknown (Iran Bastan Museum 1977, 63, no. 390). Finally, a fragment of an axe, preserving only three spikes, derives from a metal hoard of probable early first-millennium date at Tang-i Hamamlan (Thrane 1964, 158, fig. 5; cf. Moorey 1971a, 53, no. 20); and a complete example was excavated at Surkh Dum.² Thus, we may date our axes between the twelfth century (leaving aside the Tchoga Zanbil example, which is an earlier form) and 900 B.C. (or later: see note 2).

Neither the inscribed nor the Tchoga Zanbil example has the zoomorphic juncture or the animal-head spikes, and it may be that subtypes like No. 304 are later embellishments. Yet that, for at least the time during their manufacturing history, both the plain and embellished zoomorphic forms existed together is indicated at Kotal-i Gulgul where contemporary tombs yielded plain examples and at least one embellished one.

Many plain examples exist in various collections (see Calmeyer 1969a, 67ff.; Moorey 1971a, 49ff.); here I cite