CATALOGUE OF THE ANCIENT PERSIAN BRONZES IN THE ASHMOLEAN MUSEUM

BY

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jewellery and plate during the Achaemenian period (*Persia*, fig. 556; Barnett, *BMQ*, XXII, 1960, pl. VII; Kantor, *JNES*, XVI, 1957, pl. III, top, p. 14). As Hamilton's analysis showed there is nothing in the drawing of the animals' heads which would contradict any attribution between *c.* 700–400 B.C. The designer followed a series of conventions common both to Late Assyrian and to Achaemenian craftsmen when rendering lions' heads, whether in stone or metal. But the bold, circular form used to delineate the lions' shoulders is not a motif normally found in this position either on Assyrian, where the shoulder tends to be bean-shaped, or Achaemenian lions, where the figure-of-eight convention is ubiquitous. A much more diagnostic stylistic feature is the unusual convention of representing the paws of the offside forelegs back to front. This also happens on a lapis lazuli statuette of a Median holding a lion cub, now in Cleveland (Shepherd, *Bull. of the Cleveland Museum of Art*, XLVIII, 1961, p. 23, fig. 12) and on a bronze lid or mirror, said to be from Persia, now in the Schimmel collection (*Schimmel*, no. 74). Two features in the rendering of the rear leg, the posterior curve and the two almond-shaped lumps on the front edge of each hind leg, are features found on lions represented on the gold objects from Ziwiyeh (*Iraq*, XXVIII, 1968, figs. 14b, 16c). The lumps on the legs also occur earlier in Urartu during the eighth century B.C. on the lions represented on a bronze shield from Karmir Blur inscribed for Sardur II (*c.* 760–733 B.C.) (Piotrovskii, *Iskusstvo Urartu*, 1962, pl. XXV).

This bowl was said to come from Hamadan. Unsubstantiated such a provenance has little validity, but it may be correct in this case. In the light of the various parallels cited for the most striking stylistic features in the rendering of the lions it appears likely that the bowl was made in west Persia during the later seventh or sixth century B.C., when the Neo-Assyrian traditions evident at Ziwiyeh were passing more and more into the style characteristic of Achaemenian workshops of the late sixth and fifth centuries B.C. The rendering of the lions differs enough from the standard Achaemenian type for it to be unlikely that the bowl was made in the fifth century B.C., particularly when the form is Late Assyrian rather than Achaemenian. If an association with Hamadan is credible, this may be a rare example of 'Median' silverwork.

IRON

The period when Luristan may be regarded as an important centre of metallurgy in its own right broadly corresponds to the phase in the history of metalworking transitional from bronze to iron. The main characteristics of this phase were clearly distinguished by Przeworski in his pioneer study of the metal industries of Anatolia in antiquity.[1] He defined them as: the imitation of Late Bronze Age forms in iron, the simultaneous appearance of weapons and tools of the same type and purpose in bronze and iron, the inlay of bronze with iron, the combination of iron working and bronze ornamental parts in the same object, the use of bronze rivets on iron tools and weapons, and the repair of bronze objects with iron parts. Most of these characteristics may be found in the Luristan metalworkers' repertory of the earlier first millennium B.C. and examples are scattered through the preceding catalogue. The large group of decorated iron swords reported from

[1] *Die Metallindustrie Anatoliens*, 1939, pp. 175 ff.

the region deserve independent consideration as very important examples of early iron metallurgy.

Broadly speaking the gradual development of iron technology in western Persia may now be traced. The evidence for the date of early iron objects found at Geoy Tepe is too uncertain to draw sound conclusions from them, although all were very fully analysed.[1] At Hasanlu there was virtually no iron in level V, which probably ended by about 1000 B.C.[2] To the south, in cemetery 'A' at Sialk, which is approximately contemporary with Hasanlu V, the only iron objects—a dagger blade and an arrow-head—appeared together in the same grave,[3] which may be later than the rest of the cemetery. It is in the second half of the ninth century B.C. that iron first appears in quantity at Hasanlu (level IV) and bronze flange-hilted daggers are directly reproduced in iron.[4] In cemetery 'B' at Sialk, which probably spans the eighth century B.C., objects of bronze, bronze and iron, and entirely of iron, all occur together. At Giyan, apart from tomb 23, there is no iron in the graves ascribed by Cuyler Young, on stratigraphic and ceramic grounds, to his levels Giyan I (4–2), but in Giyan I (1) 23 per cent of the metal objects are of iron. This level probably dates to the second half of the eighth century B.C.[5] In the shrine at Dum Surkh iron occurred in all levels from the tenth century, but was four times more common in the seventh.[6] At Tepe Guran a single tomb[7] contained an iron dagger-blade and spear-head; in form it differed from other graves on the site. Iron otherwise appeared only as arm and finger rings associated with bronzes, at a time probably contemporary with Hasanlu V and Sialk 'A'. The first production of iron objects in Luristan is not likely then to be earlier than the tenth century; full-scale production of complicated weapons may not have started for a century or more after the first small-scale production of iron personal ornaments and iron working parts for tools and weapons.

SWORDS

540. Iron; wrought. Sword with the tip of the blade broken off. The tapering blade, with broad, flat midrib, is set at right angles to the hilt. The blade flares out slightly from the *ricasso*, but then gradually narrows again. The hilt has a disc-shaped, flat pommel with a pair of grotesque, bearded, human heads set one at each end of the diameter on the outer edge of the pommel parallel with the faces of the blade. The back of each head extends forward on to the top of the pommel as the fore-part of a lion. A stepped ornamental flange lies against the underside of the pommel disc where it joins the grip. The rectangular-sectioned grip is divided into three parts, by two projecting metal rings, the upper one wider than the lower ones. A lion *couchant* is set one on the upper, one on the lower side of the guard. The *ricasso* has virtually corroded away. The surface of the rest of the weapon is heavily corroded and the detail is lost.

1967. 1456. Blade: 0·390 long as extant; 0·036 max. width; 0·010 thick; Hilt: 0·145 long with *ricasso*; 0·091 wide across pommel.

Bought (Bomford Trust).

[1] *EA*, p. 205; pp. 198–203.
[2] Dyson *JNES*, XXIV, 1965, p. 197.
[3] *Sialk*, II, pl. XXXIX, S. 458–9, grave IV.
[4] Dyson, *Dark Ages and Nomads*, pl. IX.
[5] *Iran*, III, 1965, p. 66.
[6] Van Loon, *Bib. Or.* XXIV, 1967, pp. 21 ff.; 5 pieces in the tenth-century level; 20 in the ninth, 20 in the eighth, and 97 in the seventh.
[7] Thrane, *AArch.* XXXIV, 1963, p. 124.

541. Iron; wrought. Sword; broken in two across the blade. Narrow leaf-shaped blade set at right angles to the hilt. In form and decoration this weapon is exactly like no. **540**, but varies in its dimensions and is very much better preserved.
1969. 239. Blade: 0·310 long; 0·026 max. width; 0·006 thick. Hilt: 0·133 long; 0·078 wide across pommel.

These swords belong to a large class of such weapons, all very similar in form, associated with Luristan since the earliest clandestine excavations in the area (*BL*, pp. 40–1, pl. x), when they are said to have been found in great numbers. Although it is not yet clear whether they were made in Luristan or further north, it is no longer possible to sustain Herzfeld's suggestion, based on a single weapon, said to be from Samsun, that Pontus was the original home of them all (*IitAE*, pp. 135–6). Available evidence indicates that Luristan remains the source of all those reported in the last twenty years (Ternbach in *Dark Ages*, p. 49 n. 6; Maleki, *IA*, iv, 1964, pl. viii. 2). Their form and decoration are for the moment the only guide to their date of manufacture, as none has yet been found in a controlled excavation.

There may be little doubt that the form derives ultimately, by steps which may now be documented, from the type of bronze flange-hilted dirk common in western Persia in the last quarter of the second millennium B.C. Examples inscribed for Mesopotamian rulers and their officers have been reported from Luristan (Nagel, *AfO*, xix, 1959–60, pp. 95 ff.; Dossin, *IA*, ii, 1962, pp. 149 ff.) and simpler weapons of the same general form were manufactured in a variety of west Persian workshops (Dyson, *Dark Ages*, pp. 32 ff.). A very early stage in the typological development of the elaborate iron swords, a direct copy of one of the bronze weapons, is represented by a sword, formerly in the Graeffe collection, now in Brussels (*Iraq*, xxviii, 1966, pl. xlix. 2: 45·2 cm. long). A further stage, a modification rather than a radical change, is marked by lengthening of the grip, a more angular, flattened pommel and a long, tapering blade shaped like a willow leaf (*Iraq*, xxviii, 1966, pl. xlix. 3–5). Then, as happened earlier with the bronze flange-hilted dirks, the iron hilt was worked solid in imitation of a flanged hilt with its inlay plates, of wood or bone, in place (*Iraq*, xxviii, 1966, pl. xlix. 6). Indeed, as careful metallographic inspection has shown, swords made in this way follow the methods used in producing bronze flange-hilted dirks remarkably closely, even to the extent of securing with rivets the five sections which form the solid hilt (*Iraq*, xxviii, 1966, fig. 2, pp. 175–6). Methods of manufacture had been refined by the time the large series with decorated pommels and guards were put into production, but they still mark a very early stage in the development of iron technology. It is already clear from finds in level IV at Hasanlu that by the late ninth century weapons of identical form were being produced both in bronze and iron (Dyson, *Dark Ages*, p. 35, fig. 2. 2, 3). For most practical purposes the bronze flange-hilted dirk, or its counterpart with a bronze hilt cast on to an iron blade, remained in use until at least the eighth century, if not longer. These richly decorated early iron swords are likely to have been weapons of more restricted currency. On the typological evidence they could have been developed between the eleventh and ninth centuries B.C.; consideration of their decoration allows for a more precise estimate of their date.

The bearded male heads, wearing a flat cap, are not a motif found on the distinctive cast-bronzework of Luristan. The rendering of the beard and the form of the eyes is more like that on the head of a bronze statuette, reported from Luristan, which bears a cuneiform inscription relating its history (Godard, *Athar-é Iran*, III, 1939, pp. 233–6, figs. 145–50; *ILN*, 21 Aug. 1948, p. 214, fig. 2; Weidner, *AfO*, XVI, 1952, pp. 148–9). The inscription, to be dated in the sixth century B.C., reports that the figure had been removed from his temple, probably in an Elamite campaign, and returned by one Marduk-šarrani. Detached heads were used to decorate pottery at Sialk in cemetery 'B' (*Sialk*, II, pl. x. 5) and on tiles at Hasanlu in level IV (Porada, *Ancient Iran*, pl. 30). The reliefs of Assur-nasir-pal II show spearbutts cast as human heads (Layard, *Mon.* I, pl. 11). The lions' heads emerging from the back of the human heads is a very unusual feature. As has been pointed out there is a formal parallel on the boundary stone of the Kassite King Meli-Shipak (*c.* 1188–1174 B.C.) (King, *BBSMTBM*, 1912, p. 19, pl. XXIX, upper), where the winged centaur with bow (? Sagittarius) wears a helmet with an animal's head projecting backwards from it. In this case it is probably a wolf or dog, not a lion, as on the round zodiac at Dendereh in Egypt (Van der Waerden, *AfO*, XVI, 1952–3, p. 227, figs. 4–5). Lions or lion-heads guarding or spewing forth the blade of a weapon from their jaws were an extremely ancient tradition in the Near East. The lions on either side of the guards on these weapons are exactly like those on certain pinheads from Luristan which derive from bronze prototypes (Cinquantenaire, Brussels O. 2250—Godard, *Graeffe Collection*, no. 212). It is these beasts which indicate that swords of this type were probably not manufactured before the later ninth or early eighth century B.C. The remarkable homogeneity of their style and methods of manufacture suggest the work of a closely associated group of workshops over a relatively short period of time. The iron swords from War Kabud with flanged-hilts are of eighth-century date (Vanden Berghe, *Archeologia*, XVIII, Sept.–Oct. 1967, p. 56, figure).

The technology of these iron swords has been examined in detail a number of times and their method of manufacture is now well understood (Naumann, *Archiv für Eisenhüttenwesen*, XXVIII, 1957, pp. 575 ff.; Spence and Needler, *Bull. of the Royal Ontario Museum, Toronto*, XXIII, 1955, pp. 14 ff.; Maryon, *AJA*, LXV, 1961, pp. 173 ff.; Damien, *Revue archéologique*, II, 1962, pp. 17 ff.; Lefferts, *AJA*, LXVIII, 1964, pp. 59 ff.; Ternbach in *Dark Ages*, pp. 46 ff.; Maxwell-Hyslop and Hodges, *Iraq*, XXVIII, 1966, pp. 164 ff.). They were hand forged from wrought iron. The parts worked over became carburized during the frequent heating process and took on the pattern of mild steel. Each sword was made of a number of separate pieces; as many as eleven in some cases. Hodges has provided an excellent diagram of the way in which these weapons were assembled from the various components (*Iraq*, XXVIII, 1966, pp. 175–6, fig. 2). The ornaments were attached to the main body of the sword by a combination of locking and crimping, not by heat welding. Manufacture by swaging is the most reasonable explanation for the close similarity between the ornamental fittings on these swords. This technique of hammering heated metal into a mould, used to shape wrought-iron objects before the process of smelting was developed, was of some antiquity (Przeworski, *Die Metallindustrie Anatoliens in der Zeit von 1500–700*, p. 160). Small variations in the angle and manner of mounting

accounts for slight differences in the dimensions. The final details were chased or punched in on the surface of the human heads, the animal bodies, and the *ricasso* plate. The carnelian inlays on a very fine sword of this class in New York were probably set into recesses drilled out of the iron (*AJA*, LXVIII, 1964, pl. 23). On the better preserved of these swords there is clear evidence that sheet bronze was hammered over parts of the surface of the hilt (Maxwell-Hyslop, *Iraq*, XXVIII, 1966, pp. 168, 173 n. 34, pl. L. 4, 5), perhaps to allow for a finer finish than was possible with wrought iron. One sword retains the remains of the lower part of a scabbard and its chape (Speleers, *BMRAH*, 1933, p. 111, figure).

A number of these swords have already been published from Luristan:

1. Louvre (David Weill collection). Godard, *BL*, pl. x.
2. Royal Ontario Museum, Toronto. *Bulletin*, XXIII, 1955, fig. 14, pp. 14 ff.
3. British Museum. Organ, *AJA*, LXV, 1961, pp. 177 ff.
4. Philadelphia. Legrain, *Philadelphia*, pl. XI. 43, p. 16.
5. Brussels. Speleers, *BMRAH*, 1933, p. 111, figure.
6. Hamburg. Naumann, *Archiv für Eisenhüttenwesen*, XXVIII, 1957, pp. 575 ff., figs. 1–2.
7. Teheran Museum. Godard, *Athar-é Iran*, III, 1938, pp. 247 ff., figs. 163–71.
8. Maleki collection, Teheran. *IA*, IV, 1964, pl. VIII. 2.
9. Deutsche Klingenmuseum, Solingen-Gräfräth, *7000 Jahre Kunst in Iran*, Essen, 1964, no. 210, plate.
10. Dusseldorf. Maryon, *AJA*, LXV, 1961, p. 174.
11. Damien collection. *Revue archéologique*, 1962, pp. 17 ff., fig. 3.
12. Foroughi collection, Teheran. *Sept mille ans*, no. 185; (2) *Sept mille ans*, no. 186 *Iraq*, XXVIII, 1966, pl. L. 4, 5.
13. Metropolitan Museum, New York. Lefferts, *AJA*, LXVIII, 1964, pp. 59 ff., pl. 23.
14. Berlin—MVFG: Nagel, *BBV*, V, nos. 29, 30, 31, pls. XIV–XVII.
15. Wiesbaden, *Ostas. Zeit.* N.F. VIII, 1932, plate.
16. Herzfeld collection. *Dark Ages*, pls. XII, XIII. 1, 2; *IitAE*, fig. 252; *AJA*, LXV, 1961, p. 174.
17. Rabenou collection, *Dark Ages*, pl. XIII. 3–7.
18. Institute of Archaeology, London. *Iraq*, XXVIII, 1966, pls. L. 2, LI. 3.
19. du Menil collection. Grancsay, *Made of Iron*, no. 16, plate.

The Ashmolean Museum also possesses an iron hilt, probably from the Savery collection, which is too damaged to be worth cataloguing. It is from a sword of this class.

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ANCIENT Persian metalwork has been illustrated in such a variety of places in the past forty years that no bibliography could claim to be comprehensive. Certainly this one does not. It lists only those works that have been consulted in the preparation of the preceding catalogue, so that the frame of reference is immediately apparent to the reader. In the case of the 'Luristan Bronzes' alone has a systematic attempt been made to examine and list as much of the relevant literature as possible.

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540

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