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FOUR URARTIAN BULLS' HEADS

By GEORGE M. A. HANFMANN

IN THIS ARTICLE we bring together for the first time four bronze bulls' heads of impressive size and weight which seem to form a series. One is in the collection of Mr. J. J. Emery, of Cincinnati, another is in the Fogg Museum, a third is in Cleveland (Plates XVII–XVIII), and the fourth (Plate XIX) is in the Louvre.¹ In 1954 Mr. Emery generously lent his piece to the Fogg Museum for the exhibition of "Ancient Art in American Private Collections" and, through the good offices of Miss Dorothy G. Shepherd, the Trustees of the Cleveland Museum of Art consented to send the Cleveland bull's head for a brief period. Thus I was enabled to examine and compare three of the four heads of this series. For the piece in the Louvre, which I have not seen, I am making use of photographs and measurements supplied by A. Parrot.

As R. D. Barnett was the first to point out to me,² two bulls' heads of this kind were found in 1905 in the village of Guşçi, on Urmia Lake.³

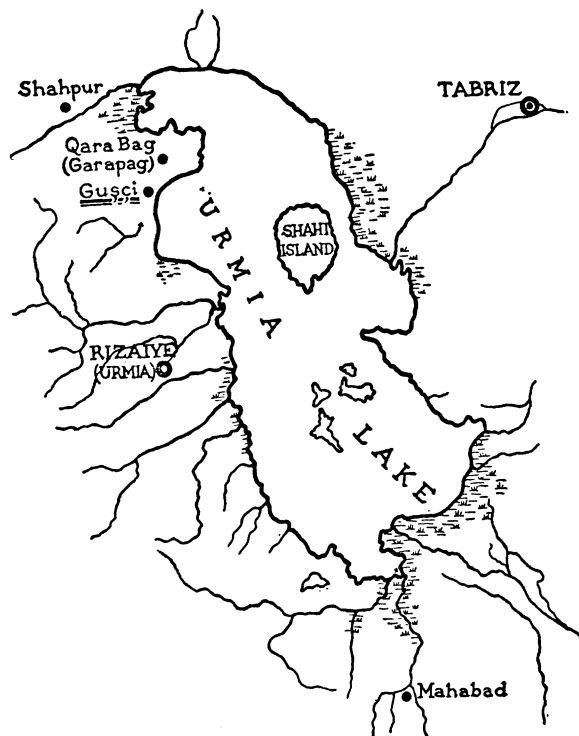


FIG. 1. Sketch-map of Lake Urmia.

¹ R. D. Barnett has made decisive contributions to this study. Dorothy G. Shepherd and Marian Welker supplied valuable information. I am also indebted to P. Amandry, A. Parrot and C. K. Wilkinson for their help.

² By letter, May, 1954. Independently M. Welker also referred to Atrpet's article.

³ For the location, cf. W. J. Turner, *Map of Persia* (1892), A-2. This, as well as later maps, spells the name *Guchi*.

An account of this discovery was given by "Atrpet" in the Armenian periodical *Azgagrakan Handess, Revue Ethnographique publiée par la Société Ethnographique Arménienne*, XXIII, Part 2, 1912, pp. 114-124. In 1943 B. A. Kuftin discussed the material from Guşçi and surmised that the bulls' heads in the Sarre (now Louvre) and Kelekian (now Emery) collections were related. He correctly identified the Sarre-Louvre head as one of the heads found at Guşçi, but he was not aware of the existence of the heads in the Fogg Museum and in Cleveland.⁴

Since the account of the discovery at Guşçi is not readily accessible, I give below a summary after the original report by Atrpet.⁵ The village of Guşçi is located on the western shore of Lake Urmia, 3 kilometres from the peninsula of Qara Bagh (Garapagh) Kent (Fig. 1). In 1905 some peasants were digging foundation trenches for a house in the locality of Ançali when they came upon a small "temple" of substantial stone masonry. They found two bull-statues made of bronze ("brass"). One of the statues was a few centimetres taller than the other; in all other respects it was difficult to tell them apart. As these statues stood on a high stone platform and had been covered by stones they were free from the disintegrating influence of humidity.⁶ Because the statues were very heavy the discoverers thought that they contained gold and smashed them with hammers. The village elders came upon this scene and saved the two bulls' heads. Subsequently one of them went to the "collection of Mecid Sultan", in Tbilisi (Tiflis), and the other was sent to Mahomet Alla Mirza (Shah of Persia, 1907-9?). The bull's head belonging to Mahomet Alla was then auctioned off and taken by A. Avtandelian to Europe to be resold there.^{6a} In the Guşçi ruins there was also found the mummified skeleton of an "Apis" (bull) which was smashed and thrown into the lake by the finders.⁷ A bronze snake and some silver vases were kept by the owner of the land. Among other worn and disintegrated ornaments was part of a "copper" belt with rows of three lions and three bulls (Plate XX, 2).

⁴ "Urartskiy kolumbariy u podoshvy Ararata," *Viestnik Gossudarstvennogo Muzeya Gruzii*, XIII B, Tibilisi, 1943, pp. 40-5, 138 (English summary), 149, 165 f., Pls. X, 1-2, XI, 3.

⁵ As translated by Mr. B. H. Kazandjian.

⁶ R. J. Gettens observed that the presence of chloride (atacamite) in the interior of the Fogg head indicates that the objects came "from an arid region".

^{6a} I am unable to identify "Mecid Sultan", whose collection, according to Atrpet, was located in Tiflis in 1912. It seems an unlikely location for any collection of Sultan Abdul Mecid. Kuftin's translator and Mr. Kazandjian agree that Atrpet speaks of Mahomet Alla Mirza as shah; R. D. Barnett (by letter) "a sheikh".

⁷ If the bull was "mummified" intentionally he cannot be interpreted as food supply for the dead, but must have had some special significance. Kuftin, p. 40, translated "covered with wax" the word rendered by Mr. Kazandjian as "mummified". He refers to Strabo, 751 (XV, 3 : 20), for the Persian practice of covering the bodies of dead humans with wax before burial. His reference to Servius, *Aen.*, VI, 420, is irrelevant; there honey not wax is involved. Very little seems to be known about the burial practices of the Urartians. Cf. Kuftin, pp. 69 ff., on a group of cremation burials, and B. B. Piotrovskiy, *Urartu*, 1939, pp. 48 f., on "native" inhumation burials, some of which contained skeletons of horses, dogs and camels. Atrpet quotes Y. Lalayan's discovery of a chamber tomb at Mertbneri, in Kegharkounik province, where the skeleton of a large ox was lying beside the north wall.

The Avtandelian bull's head is illustrated on pages 117 and 118, the Mecid Sultan head on page 120 and the belt fragment on page 121 of Atrpet's article.

It is possible that the structure uncovered at Guşçi was a Urartian chamber tomb like that found in 1938 at Altın Tepe.⁸

The four bulls' heads of our series are so similar that I was unable to identify the two heads from Guşçi with certainty until three of the pieces were on hand for comparison with Atrpet's photographs. The correct identifications follow :—

1. Fogg Art Museum of Harvard University, Cambridge, Mass., U.S.A. Accession number 1943.1321. Collections : Mahomet Alla Mirza, A. Avtandelian, J. Brummer (?), Grenville L. Winthrop. Description by G. M. A. Hanfmann and D. P. Hansen, with chemical and metallurgical analyses by R. J. Gettens and H. C. Harrison to appear in *Dergisi*.^{8a} The present article supersedes and corrects the discussion of this piece in *Dergisi*. (Plates XVII, 2, XVIII, 2.)

The Fogg piece is the smaller of the two bulls' heads discovered at Guşçi. The photograph of the top of the head in Atrpet's article (p. 117) shows that the stumps of the horns were becoming detached at base. This fits only the Fogg piece (Pl. XVII–XVIII, 2). Three rivets are seen at neck in the photograph of the profile (Atrpet, p. 118). Such rivets survive only in the Fogg head. The break of the "collar" at neck corresponds as do the major areas of surface damage, if we allow for the fact that the Fogg bull's head had been very thoroughly cleaned prior to its accession to the Museum. The horn stump seems to present an obstacle to identification. In Atrpet's photograph it is on the right, in the Fogg piece on the left side of the head. Yet the comparison of the stump showed it to be the same. Presumably it had been shifted from one side to the other. R. J. Gettens wrote in his examination (September, 1950) : "The horn became detached. At the base was found a filling of solder and glue indicating a recent repair." It is interesting that while the horn "showed patches of the same abraded red cuprite and green that one can see on the head", the materials of head and horn differed. H. C. Harrison noticed that the head "is relatively pure copper-tin alloy with unusually low concentration of extraneous materials", while the horn is "a copper-tin-zinc alloy with relatively high concentration of Cr". Since head and horns are ancient, it follows that not only were the horns cast separately but that they were cast from somewhat different material, perhaps to obtain a difference of colour.

2. Louvre, Inv. AO. 17.207, is the larger of the bulls' heads from Guşçi. Atrpet, p. 120, quarter view. Repeated after Atrpet in Kuftin, Pl. XI, 4, and mentioned, p. 166, as "a piece from Guşçi". Kuftin, Pl. X, 2, is the same head described incorrectly on p. 165 as a reproduction

⁸ *AnSt*, III, 1953, p. 121.

^{8a} The article referred to appears in *Türk Arkeoloji Dergisi* VI : 2, 1956, pp. 40–55. The ungrammatical abbreviation *Dergisi* stands for this periodical, a revival of *Eski Eserler ve Müzeler Genel Müdürlüğü, Türk Tarih, Arkeologiya ve Etnografya Dergisi*.

after the photograph of one of the Guşçi pieces. On pp. 40 f., 149, n. 48, Kuftin identifies it correctly with Atrpet, p. 120, but confuses the reader by referring to the wrong illustration, Pl. X, 1, Emery. Collections : Mecid Sultan, Tiflis ; F. Sarre ; Mrs. M. Sarre-Humann. Exhibited at Burlington House, 1931. F. Sarre, *Die Kunst des alten Persien*, 1923, pp. 19 f., 63, Pl. 45. *Persian Art, An Illustrated Souvenir*, 1931, Pl. IX, no. 10. R. Dussaud, *Bull. Musées de France*, 1933, p. 139. G. Contenau, *Manuel d'archéologie orientale*, IV, 1947, p. 2266, fig. 1289. I have not seen Kh. Samuelian, *The Culture of Ancient Armenia* (in Armenian), I, Erivan, 1931, Pl. XXXV, fig. 61, quoted by Kuftin. (Plate XIX, 1-2.)

The horns are preserved to approximately the same length as in Atrpet's photograph and the "warty" corrosion corresponds. In the Cleveland piece (Plates XVII, 3, XVIII, 3) the right horn is shorter.

Sarre, p. 19, states that the piece was found near Lake Urmia.

3. J. J. Emery, Cincinnati, Ohio. Allegedly "from Persepolis". Formerly D. Kelekian. Exhibited at Persian Exhibition, Burlington House, 1931, and Fogg Art Museum, *Ancient Art in American Private Collections*, 1954-55. A. U. Pope, *Cahiers d'art*, VI, 1931, p. 84, photograph. T. Borenius, *Pantheon*, VII, 1, 1931, p. 91, photograph. Kuftin, pp. 41, 149, n. 48, Pl. X, 1, after Pope. Fogg Museum, *Ancient Art*, 1954, no. 75, Pl. XXIII. (Plates XVII, 1, XVIII, 1.)

Kuftin rightly observed that this piece is not one of the Guşçi pieces.

4. Cleveland Museum of Art, Accession number 42.204. Formerly Christian R. Holmes Collection. A. U. Pope, *A Survey of Persian Art*, 1938, Pl. CVIII. *Id.*, *Masterpieces of Persian Art*, 1945, Pl. XX. *Archaeology*, VI, 1953, p. 199, photograph. I am indebted to Dorothy G. Shepherd, Curator in charge of the Near Eastern Department, for her co-operation. (Plates XVII, 3, XVIII, 3).

COMPARATIVE TABLE

	Fogg	Louvre	Emery	Cleveland
Weight	1,535 grammes	—	1,774 grammes	1,991 grammes
(According to A. Parrot the Louvre piece cannot be detached from its mounting.)				
H. with horns, as preserved.	10.5 cm.	15 cm. (Sarre : 13.5 cm., neck horizontal)	11.5 cm.	10.5 cm., standing on neck
W., minus horns .	5.7 cm.	7.7 cm.	7.4 cm.	7 cm.
Top of mane to tip of muzzle .	9.8 cm.	—	9.8 cm.	9.9 cm.
W. of muzzle .	4 cm.	—	4 cm.	4 cm.
Top of mane to edge of neck .	5.5 cm.	—	6.1 cm.	6.2 cm.
Maximum l. of base	7.8 cm.	—	8.6 cm.	8.0 cm.
Maximum w. of base	5.6 cm.	—	6.5 cm.	6.0 cm.

The following precise measurements were taken by Mr. J. Washeba, of the Department of Conservation, Fogg Museum :—



3

2

1

Bulls' heads in (1) Cincinnati, (2) Fogg Museum, (3) Cleveland.



3

2

1

Bulls' heads in (1) Cincinnati, (2) Fogg Museum, (3) Cleveland.



(1) Bull's Head in the Louvre, front.



(2) Profile.



(1) Ivory bull's head in the British Museum.



(2) Bronze belt found at Guşçi.

	<i>Fogg</i> cm.	<i>Emery</i> cm.
1. Across upper lip	5.05	4.91
2. Across lower part of mane	3.53	3.12
Across upper part of mane	4.00	3.62
3. Right eye	1.26	1.32
4. Width of eyebrow, right	1.28	1.28
5. Length of eyebrow, right	2.89	3.24
6. Length of jaw from eye	4.25	4.12
7. Between horns	7.55	7.00
8. Behind mouth	4.42	4.48
9. Across nostrils	3.78	3.7
10. Across bridge of nose	2.50	2.57
11. Upper lip, vertical	2.25	2.08

The identification of the Fogg and Louvre bulls' heads with the two pieces found at Guşçi leaves the Cleveland and Cincinnati heads without definite provenance. There is no real authority for the allegation that the Cincinnati head was found at Persepolis. It is apparently known that the head was brought out of Persia, but I have not been able to obtain any further reliable information.

That the four pieces are closely related is even more evident in originals than in photographs, in which over-cleaned details of the Fogg head emerge more sharply than the patinated and warped details of the other heads. If we examine the dimensions, the measurements of the faces from muzzle through mane and jaw correspond closely, while the all-over dimensions show greater variations. The differences in weight are brought about less by the varying preservation of the horns than by different treatment of the necks and "collars" used for attachment. The Fogg Museum piece has a much smaller triangle under the jaw than the others. It was filed off at neck and an inner "collar" of bronze was rammed into the base. On each side of the neck five rivets were driven through the inner "collar" and into an outer metal ring, which seems to have formed part of a plate to which the bull's head was riveted and soldered. The other three heads show clear signs that the lowest frontal parts of their necks are added. The seam or join is seen below the "bump" on the neck of the Cleveland head (Plates XVII and XVIII, side views). On the Emery head it starts just below the shadow cast by the muzzle (Plate XVII, 1, side view). The seam is clearly visible as a white line on Sarre's photographs of the Louvre head. These additions account for the discrepancies of height.

Other adjustments were carried out at the bases (Plate XVIII, lower register). Two inner "collars" were forced into the Cleveland bull head, one into the Emery piece. The latter, according to Mrs. Leland C. Wyman, also shows holes for rivets on the left side of the bull's neck (Plate XVII, 1, front view).

The exact method of casting and the number of moulds used is difficult to determine. I have consulted on this question with Mrs. Leland C. Wyman, Mr. William J. Young, of the Boston Museum, and Mr. J. Washeba, of the Fogg Museum. Mrs. Wyman points out that the horns were cast in two vertical halves which were then fastened to the hollow

base by means of a core. A fragment of this core is seen in the Fogg head (Plate XVII, 2, side view) ; and Mrs. Wyman interprets the "puddle" on the horn stump of the Emery piece as part of a core (Plate XVII, 1). The ears were cast separately and then inserted between two projections, a triangular piece in front, a larger, rounded one at back.

Signor Bruno Bearzi, of the Uffizi, equally experienced as bronze caster and restorer, has stated that the Fogg head was cast with lost wax process and Mrs. Wyman agrees. This would be true whether the heads were cast in sectional moulds or in a one-piece mould.⁹ What is difficult to explain is the difference of certain details, for example in the size and shape of the mane. Tentatively, we assume that the starting point was a master model. Sectional moulds were taken from this ; then wax casts were taken from the sectional moulds. The differences of detail may have been caused by re-working of the wax moulds at that stage. The wax copies were then used for final casting. The final casting may have been done again with sectional moulds. Mrs. Wyman believes that there are some indications of casting seams : one separating head and muzzle and another running in front of ears and horns so that the head proper was in a mould composed of three sections. Mr. Young has exposed one of these seams on the interior of the Fogg head.

Atrpet's informants spoke of two "statues", one of a bull, one of an ox that were allegedly found in the "temple" of Guşçi. While this report actually cannot be disproved, the occurrence of four statues with the same bulls' heads seems unlikely.¹⁰ In the *Dergisi* article D. P. Hansen and I thought that the bulls' heads may have decorated the sides of a throne. Such bronze bulls' heads are preserved on the part of an Assyrian throne from Nimrud and are portrayed on the stele of Barrekub.¹¹ The bulls' heads of the thrones, however, have "stunted" horns. The prong-like horns of the Guşçi group would have been a danger to the occupant of a throne.

There remains the solution favoured by Sarre and Barnett (by letter) ; the four Guşçi bulls were attached to a cauldron. An intact cauldron of this kind has been found at Altın Tepe.¹² Another series of four bulls' heads from Toprak Kale was certainly used in the same way, since two of the pieces preserve the characteristic plates used to attach the heads to the

⁹ Piotrovskiy, op. cit., pp. 40 f., thinks that bulls' heads and winged figures for cauldrons were cast in sectional moulds of clay or stone. Cf. Barnett, *Iraq*, XVI, 1954, p. 21.

¹⁰ In the picture of the pillage of the temple at Muşasir there are shown statues of a cow and a calf, which are also mentioned in Sargon's report of the event. But these were at least half life size. Cf. R. D. Barnett, *Iraq*, XII, 1950, p. 21, fig. 11.

¹¹ E. Unger in H. Th. Bossert, *Geschichte des Kunstgewerbes*, III, 1930, pp. 395 f., fig. 1. Bossert, *Altanatolien*, 1942, figs. 1181-2. F. von Luschan, *Ausgrabungen in Sendschirli*, IV, 1911 = *Mitt. Orient. Samml. Berlin*, XIV, pp. 246 f., figs. 256, Pl. 60. The heads on the throne of Assurnasirpal must be rams, not bulls as we said in *Dergisi*. E. H. Wallis Budge, *Assyr. Sculpture in the British Museum*, 1914, Pl. 31. Frankfort, *AAO (Art and Architecture of the Ancient Orient)*, 1955), pp. 87 f., Pl. 89.

¹² Sarre, pp. 20, 63. R. D. Barnett and Nuri Gökçe, *AnSt*, III, 1953, pp. 121 ff., Pls. XII, XIV, XIX, 1. The bulls' heads are "brazed on to T-shaped plates".

wall of the cauldron.¹³ Others have been found "in Kurdistan" ¹⁴ and at Karmir Blur.¹⁵ The Guşçi series appears to have the largest and heaviest specimens and the cauldron to which they were attached may have been even bigger than the imposing piece from Altın Tepe.¹⁶

Politically the western shore of Lake Urmia was at times part of the Mannia country.¹⁷ Attempts have been made lately to allocate architectural types and metal objects to "Mannaeen" art. Thus A. Godard regards the Ziwiye hoard as largely "Mannaeen" and sees in "Mannaeen" artisans the teachers of Scythians as well as of Persians.¹⁸ But the bulls' heads found at Guşçi are so closely allied to the bulls' heads found at the later capital of Urartu (Toprak Kale) that they may be called "Urartian" legitimately. This was the view taken by Kuftin, who has shown that the bronze belt found together with the bulls' heads at Guşçi (Plate XX, 2) must be accounted Urartian.¹⁹

This same belt may provide an indication of the date of the Guşçi find, if we accept Kuftin's comparison of the "lumpy" animals graven on the belt with animals on the bronze shields dedicated by the Kings Rusas II (680-645 B.C.) and Rusas III (c. 600 B.C.) of Urartu.²⁰

Before deciding upon the date it may be well to consider the stylistic development of the Urartian bulls' heads. As happens not infrequently in Near Eastern art of the early first millennium, the nearest typological ancestors are to be found in Sumerian art of the third millennium. Thus the distinctive "mane" placed over the forehead is seen on copper bulls' heads from the Royal cemetery of Ur.²¹ This is hardly to be interpreted as a conscious revival of Sumerian art by the Urartians. The intermediary

¹³ R. D. Barnett, *Iraq*, XII, 1950, pp. 1 ff., figs. 1-2, Pl. XVI. P. Amandry has discovered that a piece in the Walters Art Gallery and another bull's head in a private collection belong to this series. cf. D. K. Hill, *The Fertile Crescent*, 1944, p. 31, fig. 25.

¹⁴ In 1859 "near the South Caucasian frontier". Kuftin, pp. 41, 149, n. 51-2, Pl. XI, 5. B. B. Piotrovskiy, in Hermitage Leningrad, *Trudy Otdela Vostoka*, I, 1939, p. 50. Hermitage 16 004. Found together with a typical Urartian "winged-man" attachment.

¹⁵ R. D. Barnett, *Iraq*, XIV, 1952, p. 142, fig. 8. Atrpet, pp. 115 f., reports the discovery of two bulls' heads in a tomb at Diraklar, in the Shirağ valley, but nothing further seems to be known about them.

¹⁶ My notes on the bulls' heads from Altın Tepe (Ethnographic Museum, Ankara) say "smaller than Fogg". Barnett gives 9 cm. as the height of BM 91240 from Toprak Kale, apparently measured without horns. Fogg would be 10.4 cm., Cincinnati 9.9 cm., in the same position.

¹⁷ Piotrovskiy, *Urartu*, p. 16. On his map, however, he places Gilzan in this region. Olmstead, *History of Assyria*, 1923, puts Gilzan at the north-west tip, Parsua along the western shore, but mentions it as in possession of "Mannai" at various times, pp. 263, 363.

¹⁸ *Le trésor de Ziwiye*, 1950, pp. 9 ff. K. Schefold, *Handbuch d. Archäologie*, VII, 1954, p. 428, calls the treasure early Achaemenid.

¹⁹ For the belt, cf. Atrpet, p. 121, photograph. Kuftin, pp. 40, 138, 149, Pl. XI, 1. R. D. Barnett and C. K. Wilkinson have identified a part of the same belt in the Metropolitan Museum, Accession number 52.123. Plate XX, 2, is after the drawing in Kuftin, Pl. XI, 1.

²⁰ Kuftin, p. 44. For the jumping animals of the belt, cf. Godard, op. cit., fig. 109, very like the bronze plaque from Shirağ, Kuftin, fig. 44, and Piotrovskiy, *Urartu*, p. 53, fig. 36, bronze belt from Kars dated in the early 6th century on the strength of "Proto-Scythian" elements.

²¹ C. L. Woolley, *Sumerian Art*, 1935, p. 78, Pl. 39a.

forms of the second millennium are apparently lost,²² but the resemblance to Sumerian bulls makes it clear that the Urartian bulls' heads adhere closely to a traditional Mesopotamian type. Urartian art has been described by H. Frankfort as provincial Assyrian and it is natural to look to Assyria for the immediate models. As far as one can judge from representations of bulls' heads in stone reliefs and ivory, Assyrian and Babylonian artists employed a more unified and consistent arrangement of stylised details. Thus in an ivory head from Sippar (Abu Habba) (Plate XX, 1)²³ the curves of the eyebrows sweep right on into the curving "veins", which run down and off the muzzle. A collar of semi-stylised locks runs around neck and jaw. A similar "collar" is seen on the bulls' heads of the throne of Barrekub,²⁴ of c. 730 B.C. The bulls' heads from Toprak Kale present a linearised and schematised version of this Assyrian system of details. They, too, have been dated in the late 8th century.²⁵ The bulls' heads of the cauldron found at Altın Tepe go beyond the Toprak Kale examples in turning the locks of the "collar" into graven, ornamental spirals. On the other hand, eyebrows and the wrinkles of the muzzle are cast as plastic forms.²⁶ This is a step toward the style of the Guşçi series in which manes, eyebrows and details of muzzle are all cast in relief; and the "collar" of locks around the neck has been omitted.²⁷ If simplification of elaborate Assyrian patterns and increase of plastic, cast detail are characteristic of the development, then we may consider that the series of Urartian bulls' heads begins in the late 8th century and ends probably in the late 7th with the poorly illustrated pieces from Karmir Blur.²⁸ The development of the Urartian "winged-men" (Assur-Attaschen), which like the bulls' heads were used as cauldron attachments, follows similar lines. Here the dating to the 7th century is assured for several pieces. As two of the Assyrian models are preserved, the trend toward simplification is seen more clearly.²⁹

The Guşçi type of bull's head appears more natural and animated than the staid bulls of the Assyrian reliefs or the earlier Urartian bulls from Toprak Kale and Altın Tepe. While some traditional, "ornamental" conventions survive, they do not obtrude. The Persian bulls of the

²² Those preserved are not of the "square-maned" type. Cf., for example, ivory bulls' head from Megiddo, Bossert, *Altsyrien*, 1951, fig. 1113.

²³ British Museum 91 884 (1061), c. 800 B.C. ? I owe the photograph to the kindness of R. D. Barnett.

²⁴ H. Frankfort, *AAO*, 1955, Pl. 162.

²⁵ *Iraq*, XII, 1950, pp. 36 f.

²⁶ *AnSt*, III, 1953, Pl. XIX, 1.

²⁷ This is apparently also true of the piece from Kurdistan in the Hermitage, Kuftin, Pl. XI, 5. It belongs to another set, perhaps slightly earlier than the Guşçi series.

²⁸ *AnSt*, III, 1953, p. 129. *Iraq*, XIV, 1952, p. 142, fig. 8.

²⁹ E. Kunze, *P. Reinecke Festschrift*, 1950, pp. 96 ff., with bibliography. The fine Assyrian bearded man, now according to Dr. J. Hirsch in Copenhagen, is imitated in the Urartian piece from the Tomba dei Lebeti, Vetulonia. Assyrian: E. Kunze, *Kretische Bronzereliefs*, 1931, Beilage 6, no. 22. Detroit Institute of Arts, *Small Bronzes of the Ancient World*, 1947, no. 13. Urartian: Giglioli, *L'arte etrusca*, 1934, Pl. VI, 1, same style as the figurine of a god from Toprak Kale, *Iraq*, XII, 1950, Pl. XVIII, 2.

Achaemenid era with which the Guşçi piece was compared by Sarre seem to me very different, indeed.³⁰ They are copied directly after Assyrian or Babylonian models and then rendered with considerable and intentional emphasis on the stylised areas of locks, veins and the like. Theirs is an "archaistic" style; the artists were overdoing these traditional motives because they were directed to show that the court art of Persia was a continuation of the royal arts of Assyria and Babylon. Actually, their own vision had advanced considerably toward naturalism; and to obtain the necessary effect they emphasised what looked old-fashioned and traditional to them.

If we have dated the Guşçi bulls' heads in the 7th century correctly,³¹ they are a valuable indication that "Urartian" art³² was capable of positive achievement even in its later phase. They add another proof to the claim that Assyria and the mountain countries to the north-east were jointly responsible for a great flowering of figurative decoration in metal work applied to furniture and vessels. These metallurgical products were largely Mesopotamian in style in contrast to the hybrid products of Phoenicia and North Syria and the barbarised "Sub-Hittite" bronzes of Anatolia.³³ They were highly prized in Greece and Italy. Indeed, Near Eastern cauldrons decorated with bulls' heads were exported to Greece and imitated by the Greeks, although I have not found so far any example of the "square-maned" type discussed in this article.³⁴ If more scientific excavations could be undertaken in the area of the Urartian kingdom and its neighbours we should be able to define more clearly the development of Assyrian and Urartian metal work and its influence upon the neighbouring peoples (Medes, Scythians) and the countries of the Mediterranean.

Sources of illustrations : Plates XVII–XVIII, Fogg Museum (J. Ufford).
 Plate XIX, 1, after Contenau, *Manuel*, IV, fig. 1289.
 Courtesy Editions A. & J. Picard.
 Plate XIX, 2, Louvre (G. Franceschi).
 Plate XX, 1, British Museum.
 Plate XX, 2, after redrawing in Kuftin, Pl. XI, 1.

³⁰ Cf. Sarre, *Die Kunst des alten Persien*, 1922, Pls. 21, 37, 40.

³¹ In the *Dergisi* article we had argued that the resemblance to the ram-heads on Assurnasirpal's throne implied a date in the 9th century. E. A. Wallis Budge, *Assyr. Sculpt. Brit. Mus.*, 1914, Pl. 31. Similarly, Kuftin thought that the Guşçi bulls' heads must be earlier than all other Urartian bulls' heads, because they are superior in quality and plastic in detail. We know so little of the earlier phase of Urartian art that certainty is impossible.

³² Assyrian annals indicate that political units other than Urartu (Mana, Muşafir) were involved.

³³ I have collected material on Anatolian bronzes; it provides no support for Kunze's recent suggestion that Urartian "winged-men" and related bronzes were produced in Eastern Anatolia.

³⁴ E. Kunze, *Reinecke Festschrift*, 1950, p. 98, n. 14, publishes a Near Eastern cauldron bull's head from Argos and lists Greek imitations.