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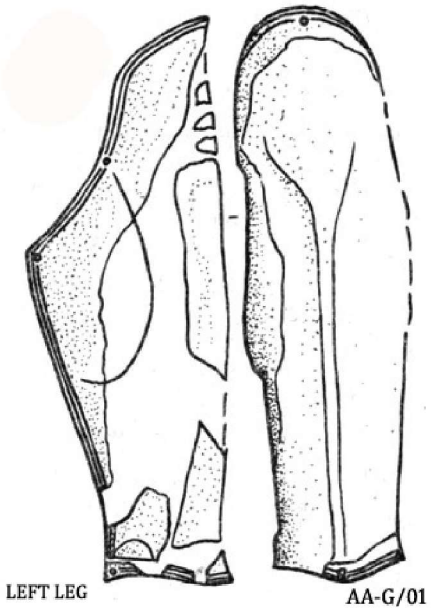
DPhil Archaeology

Submitted in HT 2012

THE WESTERN CAUCASUS
IMPORTED ARMOUR IN THE HELLENISTIC PERIOD

Vol. II – Catalogue of Finds

AA/G-01



A. AA/G-01, left greave in profile and from the front.
(After Voronov 1991, Fig.3)

Greaves type: Classical, full-length.
Find site: Akhul-abaa
Find context: Found by a local historian, V. A. Yushin in 1979, in a burial damaged during agricultural work along the hill just north of the main Akhul-abaa hill. The burial contained metal and ceramic vessels, cosmetic items and a number of weapons.
Dating: The burial is dated to the 4th-3rd centuries BC based on the burial goods.
Material: Bronze.
Single/Pair: pair
Other weapon finds: A bronze Chalcidian helmet (AA/H-01),12 iron spearheads, two iron daggers, an iron sword, an iron makhaira, an iron knife, a wooden knife with traces of rust.
Preservation: Greave pair - no images of the right greave available.*
Discovered in fragments. The left greave better preserved, with only a few missing sections, including the ornamental border on the inside of the lower leg. The right greave is only fragmentarily preserved. The edges, particularly the outer ones, are the best preserved, but much of the inner sections are missing. Nothing can be said about the patina or any possible surface damage.
Description: Left greave:
Form: A full-length greave with rounded kneecap section, slightly wider calf and relatively straight lower leg, which finishes with a short, pointed outward flare to the front. The lateral edges follow an S-shaped curve from the knee to the outer calf.
Anatomical details: The rendering of anatomical details appears somewhat reduced in Voronov's drawings. The kneecap was only preserved fragmentarily, however, it is clear that the upper tibia is a protruding, rounded triangle that narrows into a thin shinbone. Note that the shinbone protrusion carries all the way to the greave bottom. A slight jutting of the longer inner vastus is visible in the greave profile.
The calf is given as a rounded, elongated muscle which bulges softly at the side. No indication of the soleus, anterior or peroneus muscles is visible.
Edges: All visible edges are lined with an ornamental border consisting of dual chased lines. Note the large, uniform perforations marking the top, bottom of the greave as well as the corners and bends in the back.

Summary: The most prominent features of this greave are rather straight cut of the lower leg and the uniform perforations marking the corners and bends of the greave edges.
Location details: Abkhazian State Museum, Sukhum.
Literature: Voronov 1991, 227, Fig. 3.2.

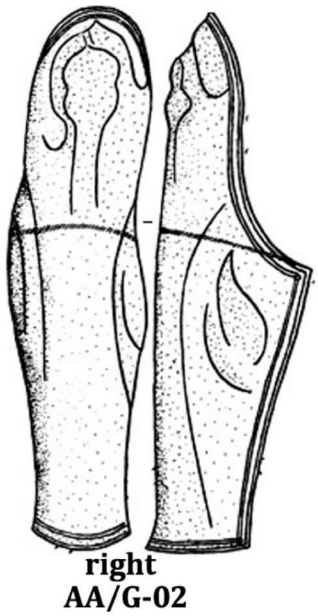
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* Yu. Voronov made only a drawing of the left greave. While technically a part of the collection of the Abkhazian State Museum, they never actually made it there, and have yet to be exhibited or photographed.

AA/G-02



A. AA/G-02. (Photograph: S. Chandrasekaran)



B. AA/G-02, right greave.
(After Voronov 1991, Fig. 2)

Greaves type: Classical, full-length
Find site: Akhul-abaa
Find context: The burial was uncovered in 1985 along the northern slope of the Akhul-abaa hill.
Dating: The burial is dated to the 4th-3rd centuries BC based on its similarity with the Akhul-abaa burial of 1979.
Material: Bronze.
Single/Pair: pair
Other weapon finds: A bronze Chalcidian helmet (AA/H-02), an, iron axe and five iron spearheads.
Preservation: Both greaves found quite fragmented, yet well preserved. The metal suffered serious oxidation and is subsequently of a turquoise-green patina.
The upper half of the left greave has gone missing since 1991.
Damage only consists of oxidised or corroded bits and a few gaps/holes. Some of the original bronze patina is still visible.
Description: Pair of greaves.
Form: The full-length greaves consist of a rounded kneecap section followed by a wide calf and lower leg which narrows from mid-shin towards the ankle and finishes with a short flare. The lateral edges follow an S-shaped curve from the knee to the outer calf.
Anatomical details: The kneecap is a distinct, rounded triangular protrusion set atop the slightly smaller, rounded triangular protrusion of the upper tibia. Directly above the kneecap are the wide, asymmetrical swells of the vastus muscles, the form of which is reminiscent of the Nymphaion greaves Nym/G-01. The triangular upper tibia narrows into the shinbone protrusion, which flattens away into the lower leg.
Note that the kneecap section of the right greave - still preserved in the original drawing - is now missing. The remaining edge indicates that this section was cut out cleanly.
The calf muscle is a thick, elongated bulge characterising the greave sides. The soleus muscle is suggested by a thick yet slight swell below the calf muscle on the inner leg, as are anterior and peroneus muscles on the exterior. Note that the outer bulge runs all the way to the bottom of the greave.
The lower leg is quite wide, with minimal narrowing. It tapers more pronouncedly at the ankle, where it finishes in a slightly curved, short outward flare.
Edges: All edges are preserved and embellished with an ornamental border consisting of chased lines running parallel to the greave edges. Note that the edges were not lined with perforations.
Reworking: Signs of reworking include a dark, discoloured, curved stripe 'wrapping' itself around each greave just below the upper shinbone protrusion. Voronov suggests these to be traces of some kind of ties or binding wrapped around greave.
Note that the now-missing upper left knee section ends at the above mentioned discolouration, and that the right knee section was also originally broken/cut at the same

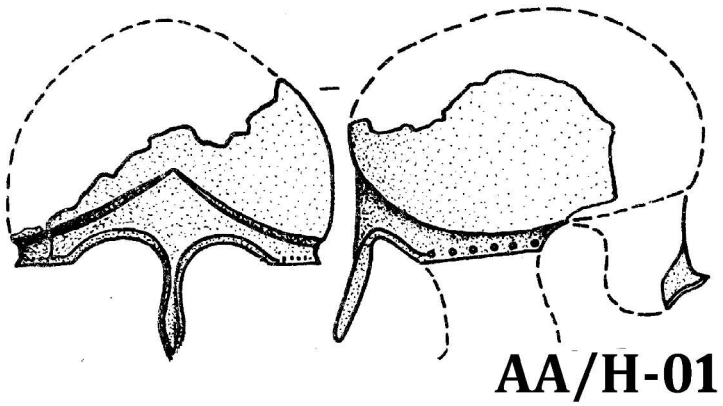
level. This could indicate that the both kneecap sections were removed at this level for some particular purpose, which for the time-being remains unknown.
Further reworking includes the rough and unevenly spaced perforations along the discoloured stripes, perhaps for the above mentioned ties/bindings. Further such perforations can also be seen at the upper corners of the right knee and along the lower leg of both greaves. Their random placement along the greaves may be due to ancient repair work.
Summary: The most noteworthy features of this pair are the relatively thick form of the lower leg, the distinctive protrusions of the kneecap and upper tibia, together with the wide, asymmetrical bulges of the vastus muscles. Particularly significant are discoloured stripes and corresponding perforations below the upper shinbone, and the fragmentary state of the kneecap section at this point.

Comparisons: The stylisation of the vastus muscles is similar to that on Nym/G-01, as is the general protruding effect of the kneecap and upper tibia. See also the greave from Olympia B 4863 (Kunze 1991, Taf. 51.1-2), the greaves from Oloneshty (Chernenko 2006, no. 655) and the greave from the tomb of 1949 in Scythian Neapolis (Maslennikov/Treister 1998, Fig. 3).
Location details: Abkhazian State Museum, Sukhum.
Literature: Voronov 1991, 227, Fig. 2.1-2.

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* The only published image is the drawing of the right greave by Voronov (1991), shown here. Luckily, the greaves have been previously exhibited, and I was able to photograph them in their present state within an old glass case. They are currently inaccessible due to renovation work at the museum.

AA/H-01



A. AA/H-01, front and left.
(After Voronov 1991, 3.1)

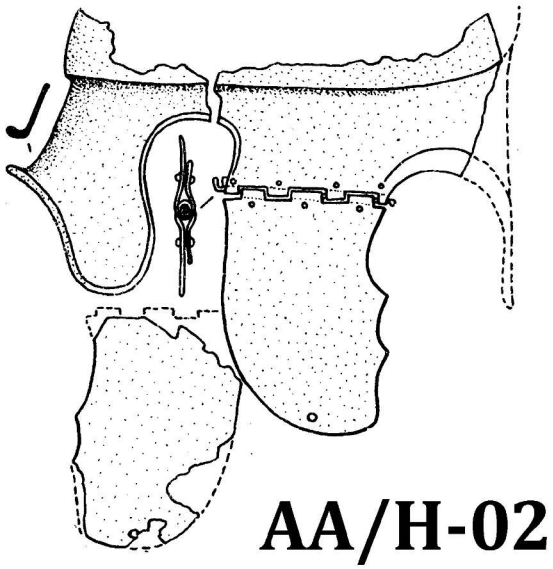
Helmet type: Chalcidian type V
Find site: Akhul-abaa
Find context: Found by a local historian, B. A. Yushin in 1979, in a burial damaged during agricultural work along the hill just north of the main Akhul-abaa hill. The burial contained metal and ceramic vessels, cosmetic items and a number of weapons.
Dating: The burial is dated to the 4th-3rd centuries BC based on the burial goods.
Material: Bronze.
Other weapon finds: A pair of bronze greaves (AA/G-01),12 iron spearheads, two iron daggers, an iron sword, an iron makhaira, an iron knife, a wooden knife with traces of rust.
Preservation: Preserved in two pieces: the front and left side of the helmet (dome and body) in one piece, and the lower edge of the neck guard as a separate fragment.
The left helmet side was cut cleanly just below the line of original hinge perforations, and the original rivets were removed. It is unclear whether the inner hinge flap was removed as well.
The cheekpieces are also not preserved.
Description: The surviving section of the helmet dome indicates a well-rounded egg shape. It is distinctly offset from the lower helmet body of smaller diameter, upon which it is set.
The helmet body falls vertically. Particularly noteworthy is the extremely short height of the helmet body in both the front and side.
The forehead section of the dome is heavily offset to form a wide gable, somewhat shallow and only slightly curved.
The front of the helmet rim is marked by small, arched cutouts for the eyes.
The eye cutouts are rather narrow and shallow, framed by a thin ornamental border. It is unclear whether this border is offset from the helmet body or simply marked by an incised/engraved line. The border is of uniform width and follows the line of the cutouts down to the tip of the nose guard.
The nose guard is thin and elongated, with a softly rounded tip.
The contour of the small, rounded ear cutout is partially preserved at the edge of the helmet side rim. It is unclear whether the ear cutout was marked with a slight flare of the edges.
The lower rim of the vertical neck guard ends with a sharp, brief outward flare. It is unclear to what extent the neck guard sides drooped into lappets.
The wide edge of the upper hinge component is lined with six evenly spaced rivet perforations. This edge edge is cut in a straight horizontal line, indicating the deliberate removal of the original hinge teeth, i.e. reworking.
Unique features include the shallowness of the slightly curved gable and the narrow eye cutouts.

Comparisons:
This helmet is of the 'standard' Chalcidian type V and thus shares features with other helmets of the greater Greek world. The short helmet body and teardrop-shaped nose guard

are reminiscent of the helmet Kut/H-01. The straight, horizontal cut of the side rim with six perforations is similar to the reworking of the helmets Kok/H-01, also Kur/H-01 and Esh/H -01.

Literature: Erlikh 2008, 82, Fig. 3.2; Voronov 1991, 227, Fig. 3.1.

AA/H-02



A. AA/H-02, right side, with cheekpieces.
(After Voronov 1991, 2.3-4)

Helmet type: Chalcidian type V
Find site: Akhul-abaa
Find context: The burial was uncovered in 1985 along the northern slope of the Akhul-abaa hill.
Dating: The burial is dated to the 4th-3rd centuries BC based on its similarity with the Akhul-abaa burial of 1979.
Material: Bronze.
Other weapon finds: Pair of bronze greaves (AA/G-02), an iron axe, five iron spearheads,
Preservation: Preserved in four pieces: the right side, the rear section with neck guard, and both cheekpieces. The nose guard has not survived. The right cheekpiece is in good shape. The left cheekpiece, however, is partially damaged.
Description: Only the ellipsoidal, rounded base of the helmet dome has survived as part of two fragments. The dome is distinctly offset from the lower helmet body, which is of a smaller diameter.
The lower helmet section is of medium height and falls vertically.
The forehead section of the dome is clearly offset to form a high, rounded gable. It is marked by the outer edge of a high, arched cutout for the eyes.
The cutout is framed by a wide ornamental edge which narrows towards the outer edge of the eye. It is unclear whether this border is offset from the helmet body or simply marked by an chased line.
Nothing survives of the nose guard, which is broken at the nose bridge.
The right eye recess is well-rounded and framed by a simple, flat-pressed ornamental border.
The neck guard is long and slants outwards, finishing with a sharp, short outward flare. The neck guard right side droops to form a long, rounded lappet. The overall form is similar to that of the Kurdzhips helmet Kur/H-01.
The right hinge component is fully preserved. It is a fairly wide component, consisting of four upper teeth and three lower teeth on the cheekpiece. The resulting hinge tooth ratio is 4:3.
Note that the outer teeth of the upper line are narrower than the inner ones.
The rivet holes - four upper and three lower - have also survived, as has the hinge pin.
The fully preserved right cheekpiece is long, with a rounded outer edge and wavy-cut inner edge. A perforation at the bottom edge suggests threading of a chinstrap.
The upper edge of the left cheekpiece is partially damaged - the hinge teeth are missing. Part of the outer and lower edges are also damaged, but the perforation at the bottom still survives partially.

Comparisons:
This helmet is of the 'standard' Chalcidian type V and thus shares features with other helmets of the greater Greek world. The overall form of the helmet dome, eye and ear

cutouts, neck guard and lateral lappets is reminiscent of the Kekuvatsky and Kurdzhips helmets.

Literature: Erlikh 2008, 82, Fig. 3.1; Voronov 1991, 227, Fig. 2.3-4.

Akh/H-01

[Image removed due to copyright restrictions]

A. Akh/H-01, three-quarter-view from left.
(Photograph courtesy of D. Aleksinsky)

[Image removed due to copyright restrictions]

B. AA/H-01, punched letters 'BN' at the neckguard.
(Photograph courtesy of D. Aleksinsky)

Helmet type: Pilos
Find site: Akhtanizovskaya
Find context: Found in 1900 as part of the so-called 'Akhtanizovsky Hoard', in reality a cist grave of stone slabs, and brought to the Hermitage in 1906. The burial contained much golden and silver jewellery, as well as other metal goods, details from a horse harness and a helmet.
Dating: The burial is dated to the turn of the 2nd to 1st century BC.
Material: Bronze. Note that the bronze composition is the same as that of both pilos helmets from Merdzhany.
Measurements: H = ca. 26; max. W = ca. 22; max. L = ca. 25.5; wall thickness = ca. 0.1;
Preservation: Originally preserved in 12 fragments. The helmet was restored almost completely in the 1930s. Sections of the upper cone are missing at the front and left side. The front part of the forehead brim has survived as a separate fragment. The lower section of the neck guard has broken away and not survived. The hinge components are relatively well preserved. Both cheekpieces have survived.
Description: The helmet form consists of a concical body with gently pointed, high crown. A short forehead brim with rounded outer edge marks the front. The neck guard - probably short - curved outward slightly. Two initials - BN - of punched dots are discernible at the right of the neck guard curve.
The forehead is marked by a high, curved gable formed as a thin, offset ridge. This curves towards the sides into a thick, disc-shaped volute.
The hinge components demonstrate a 1:2 hinge tooth ratio, where each hinge tooth is double-riveted.
Unique features include the above-mentioned punched initials and the slight discrepancy in volute size (the left is 4 mm shorter than the right).

Comparisons: This helmet is practically identical to the helmets from Merdzhany (Mer/H -01, Mer/H-02) - note the identical metal composition - and is probably of the same manufacture. The similarity in form also holds for the helmet Ge/H-01 (of which the metal composition has yet to be determined).
Location details: State Hermitage Museum, St. Petersburg. Inv. no. KP 14179.
Literature: Aleksinsky 2008; Aleksinsky 2005, FN 53; Waurick 1988, 137, Anm. 37; Rabinovich 1941, 160-1; Spitsyn 1909, 23, Figs. 1, 2;

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* I am indebted to D. Aleksinsky for providing me with high-quality photographs of the helmet as well as his 2005 and 2008 articles on the subject.
Waurick (1988, 157) erroneously claims this helmet to be of iron, stating that earlier reports indicate the wrong material - bronze. D. Aleksinsky rectifies this once and for all, also providing the results of the metal analysis in his 2008 paper (Aleksinsky 2008, 24).

BB/G-01

NO IMAGE AVAILABLE

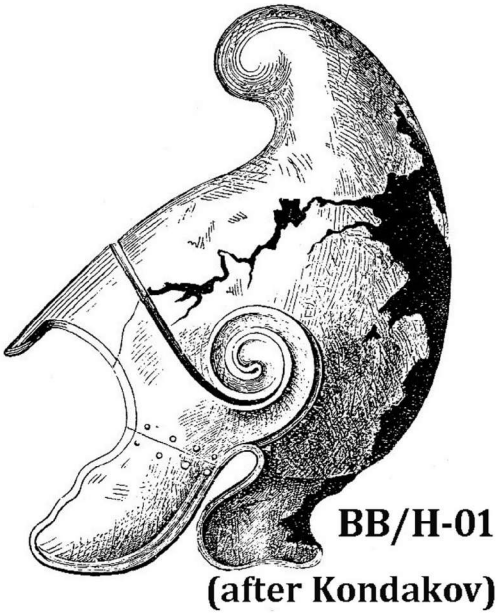
Greaves type: Classical, full-length
Find site: BOLSHAYA BLIZNITSA
Geographic location: Stanitsa Sennaya, Taman, Southern Russia
Find context: Found in 1865 in burial no. 3, the so-called 'warrior' burial, of the Bolshaya Bliznitsa kurgan. The burial contained a wealth of golden jewellery and ornaments, together with various weapons and armour.
Dating: The burial can be dated to the early 3rd century BC, based on the sarcophagus fragments and golden clothing applications.[1]
Material: Bronze.
Single/Pair: pair
Other weapon finds: The Phrygo-Chalcidian helmet BB/H-01, bronze scale armour, a long iron sword, a short dagger, seven spearheads and numerous arrowheads.
Preservation: The greaves were originally kept at the Kerch Historical Museum, but were lost during the Second World War. No images of the greaves were ever produced.
The greaves were reported to have a golden patina.
Description: No description available.

Literature: Galanina 1965, no. 7; Rabinovich 1941, 150-151; OAK (for 1865), V.

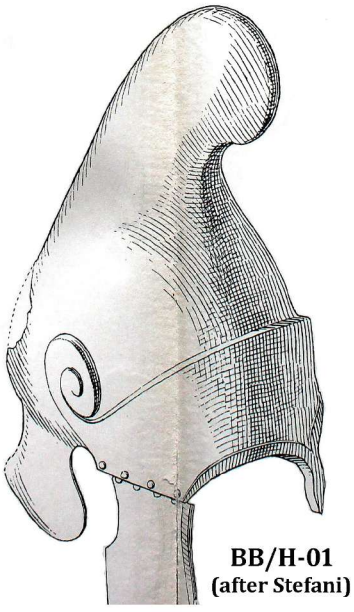
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[1] Schwarzmaier 1996, 115.

BB/H-01



A. BB/H-01, left profile after N. Kondakov in Kondakov, Tolstoi and Reinach 1891, Fig. 55.
(After Waurick 1988, Abb. 38)



B. BB/H-01, three-quarter-view from right after L. Stefani in Compte-Rendu pour l'année 1866.
(After Schröder 1912, Beil. 12,5)

Helmet type: Phrygo-Chalcidian
Find site: BOLSHAYA BLIZNITSA
Geographic location: Stanitsa Sennaya, Taman, Southern Russia
Find context: Found in 1865 in burial no. 3, the so-called 'warrior' burial, of the Bolshaya Bliznitsa kurgan. The burial contained a wealth of golden jewellery and ornaments, together with various weapons and armour.
Dating: The burial can be dated to the early 3rd century BC, based on the sarcophagus fragments and golden clothing applications.[1]
Material: Bronze.
Other weapon finds: A pair of greaves (BB/G-01, now missing),[3] bronze scale armour, a long iron sword, a short dagger, seven spearheads and numerous arrowheads.
Preservation: Now missing. All information based on the two surviving images of the helmet by N. Kondakov (A) and Stefani (B).
Stefani's drawing shows damage to the helmet in the back. Otherwise, the helmet appears to have been in excellent shape.
Both cheekpieces appear to have survived, as had traces of the golden-coloured patina.

Description: The helmet form consists of a conical body with a softly folded, rounded peak. The base of the helmet body is slightly offset at the back, before it curves into a short neck guard with slight outward flare and small lateral lappets.
A high-arched border separates the upper and lower helmet sections at the forehead. This border finishes at the helmet sides in large volutes. Kondakov's drawing (A) shows the high arch as clearly offset from the helmet body and curling into thick offset volutes at the sides. Stefani's image (B), however, depicts the forehead arch as a chased furrow that grows into a thinly offset ridge which joins up with a second similarly thin ornamental ridge (which begins at the ear) to form a volutes at the sides - the result being that only the volute edges are offset, while the centre appears 'furrowed'.
The lower brow is marked with Chalcidian features - wide arched cutouts for the eyes and small rounded cutouts for the ears. The arches of the eyes join to form a short, thick nose guard.
The eye cutouts are lined by a simple and rather narrow ornamental border. This appears to have been hammered flat in Kondakov's drawing (A), and slightly offset from the helmet body in Stefani's drawing (B).
The hinge tooth ratio appears to be 4:4. (Note that such a ratio is rather unusual and may be a mistake in the drawings).
The cheekpieces are long, with rounded outer and lower edges. The inner edge was either formed a triple-wave (Kondakov) or was simply marked with an inward curve at the top (Stefani).

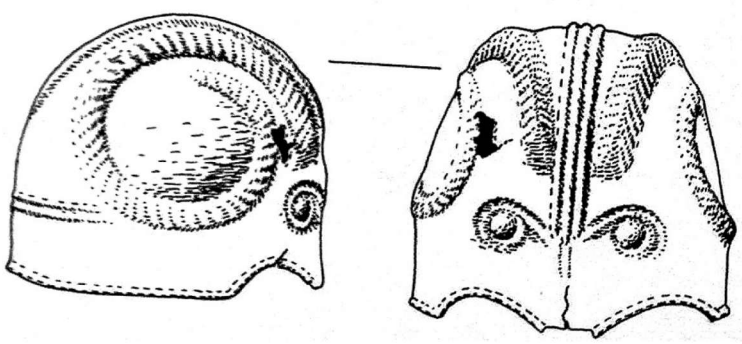
Location details: Originally intended for the State Hermitage, but never arrived.
Literature: Chernenko 2006, no.; Rabinovich 1941, 150-151; Schröder 1912, 326, Pl. 12 -5; Compte-Rendu 1867 (pour l'année 1866), 69; (for 1865), V.

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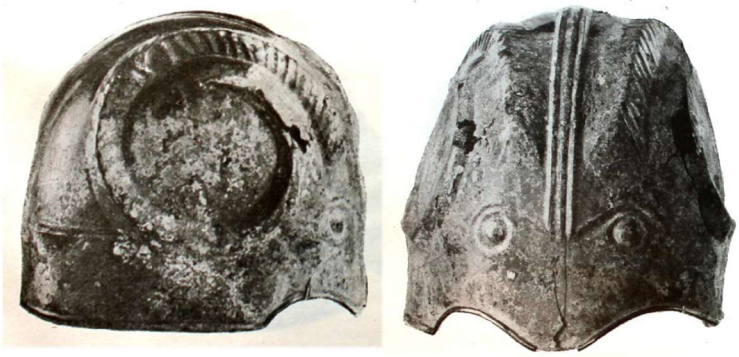
[1] Schwarzmaier 1996, 115.

[2] Vokotopoulou 1982, 508, no. 12; Rabinovich 1941, 150; Schröder 1912, 326; OAK (for 1866), 69; OAK (for 1865), V.

Dkh/H-01



A. Dkh/H-01, right profile and front. Drawing by Chernenko after photograph by B. Lunin.
(After Chernenko 2006,Taf. 30, no. 612)



B. Dkh/H-01, right profile and front. Photograph by B. Lunin.
(After Rabinovich 1941, Pl. X, 1 and 2)

Helmet type: Local variation on Chalcidian style
Find site: Dakhovskaya
Find context: The helmet was discovered during clandestine excavations carried out in 1934/35 near the village of Dakhovskaya, Krasnodar Region.
Dating: Lunin dates the items from this burial somewhat later than the 4th century BC.
Material: Bronze.
Weight: 612g.
Other weapon finds: Unknown.
Preservation: Well preserved. Some damage at the forehead. The nose guard was broken at nose bridge.
Cheekpieces were missing.
The whereabouts of the helmet itself are now unknown.
Description: The helmet is shaped as a perfectly rounded inverted bowl embellished with hammered/stamped ornamentation and Chalcidian features at the brow. There are no protruding features in the front or back.
Note the hole at the top of the helmet, possibly meant for an attachment of some kind.
The helmet crest is marked with a distinctly offset triple-ridge.
A distinction between upper and lower helmet body is made only in the back - in the form of a slightly offset horizontal double-ridge.
The forehead is marked by a pair of inverted volutes. The volute centre is hammered from within, the volute tendrils form furrows worked from the outside.
The front of the helmet is marked by narrow, almond-shaped eye cutouts which appear to have joined to form a nose guard (damaged at the nose bridge). The eye cutouts are lined with a thin, piped edge.
Note the lack of ear cutouts.
The main ornament is a pair large winding ram's horns growing out of the upper forehead - above the inverted volutes - and curling along the helmet sides. The ornament was hammered from within, quite possible using a matrix, and is embellished further with rows of finer perpendicular offset ridges running the length of the horns, thus lending them a very realistic appearance.
Of the hinge components, it is not clear whether any of the folded flaps, hinge 'teeth' or hinge pins originally survived. Of the rivets, only a few holes (not visible in the available drawings) were visible.
The hinge tooth ratio cannot be determined.

Comparisons: With the exception of the lacking neck guard and forehead ornament, this helmet form is quite similar to the helmet Mez/H-02. In terms of construction and general form, it also resembles the helmet Mez/H-01.
Location details: Unknown. Originally kept in the Rostov Office for Preservation of Historic Monuments.

Literature: Chernenko 2006, no. 612; Rabinovich 1941, 129, Pl. X; Lunin 1939, 211.

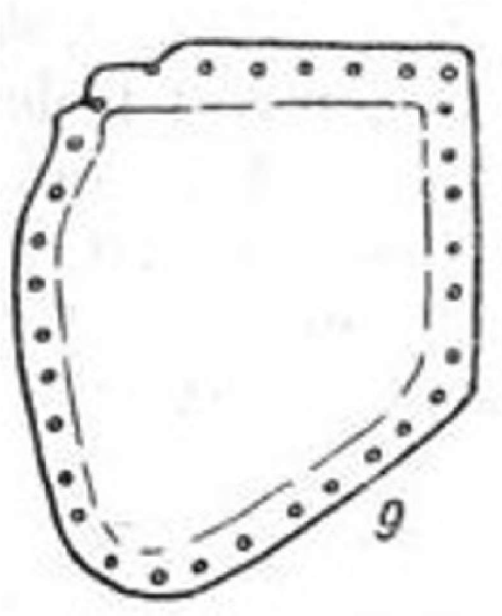
Dkh/H-02

NO IMAGE AVAILABLE

Helmet type: Local variation on Chalcidian style
Find site: Dakhovskaya
Find context: The helmet was discovered during clandestine excavations carried out in 1934/35 near the village of Dakhovskaya, Krasnodar Region.
Dating: Lunin dates the items from this burial somewhat later than the 4th century BC.
Material: Bronze.
Other weapon finds: Unknown.
Preservation: The whereabouts of the helmet are unknown. No images of it have been published.
Description: The helmet form (and construction) is reported to resemble that of the helmet Dkh/H-01.
The helmet was embellished with stamped (matrix-hammered) ornaments, supposedly in Animal Style - two horse heads marking the front, and a figure of unknown shape on each side.

No further information is available.
Location details: Unknown. Originally kept in the Rostov Office for Preservation of Historic Monuments.
Literature: Chernenko 2006, no. 613; Rabinovich 1941, 131.

Esh/Ch-01

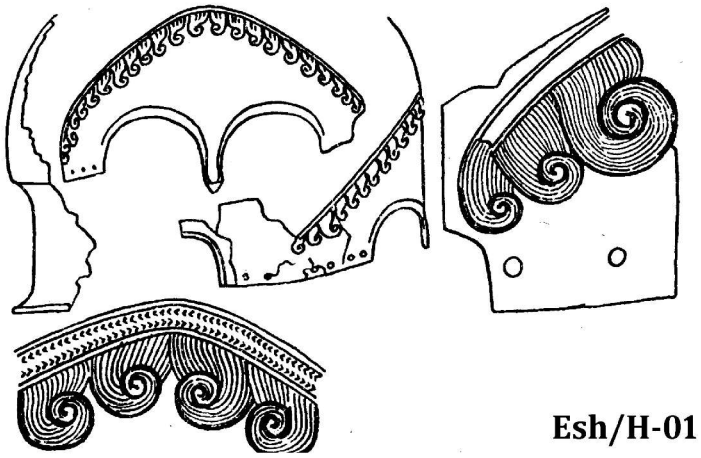


A. Esh/Ch-01.
(After Voronov 1975, Fig. 6,9)

Helmet type: Chalcidian, Eshera workshop
Find site: Eshera
Find context: From a burial to the north of the Eshera fortifications. The burial was discovered and damaged during road construction work in the area in the late 1960s. The burial also contained black-glaze and local pottery, varied fragments from other helmets.
Dating: The burial is broadly dated from the 5th-3rd centuries BC.[1]
Material: Bronze.
Other weapon finds: The helmet Esh/H-02, together with other helmet fragments (including a cheekpiece).
Preservation: Well preserved.
Description: A wide, almost square cheek flap with angular outer edge. The inner edge is slightly 'pinched' at the top.
All edges are lined with an ornamental border created by a single chased line. The border itself is marked with a series of evenly spaced perforations.

Literature: Erlikh 2008, 80; Voronov 1972, Fig. 3.9.

Esh/H-01

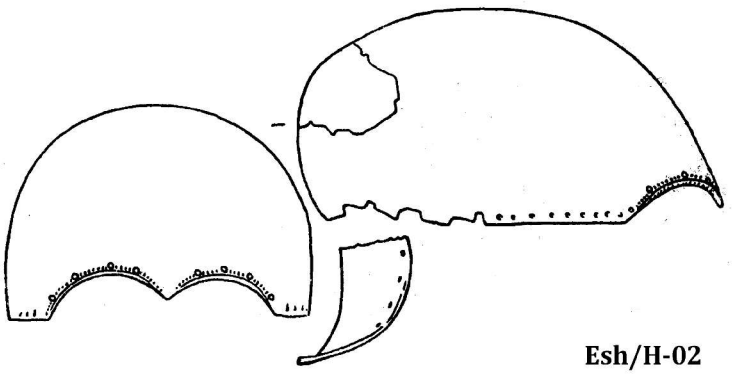


A. Esh/H-01, in three fragments, plus ornamental details.
(After Voronov 1975, Fig. 6.1-6.5)

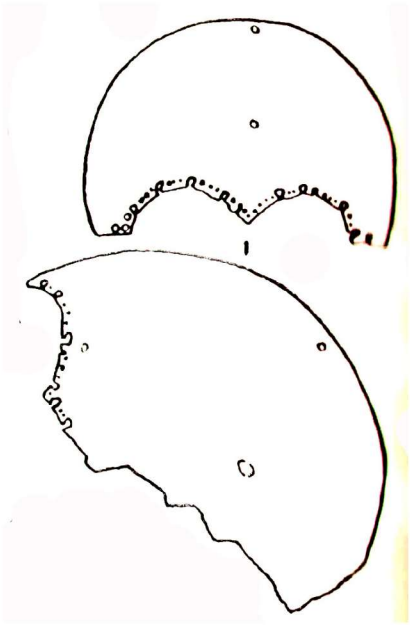
Helmet type: Chalcidian type V
Find site: Eshera
Find context: Found on the territory of the Eshera fortifications.
Dating: The burial is dated to the 5th-4th centuries BC.
Material: Bronze.
Preservation: Preserved in two fragments. One preserves most of the forehead and facial features, including part of the sides (ear cutouts). The second, from the rear, preserves part of the helmet dome and the length of the neck guard.
Description: The helmet consisted of a distinctly offset high dome atop a lower section.
The offset forehead is shaped as a high arch - an unusual form amongst Chalcidian type V helmets. The underside of the arch is decorated with (matrix-) hammered curls of hair which have been meticulously chased to render the individual hairs. The row of curls runs from ear to ear, growing in size as they move towards the middle. Above the curls runs an offset double-ridge. The space between ridges is lined by two rows of tiny, chased (or stamped) arrows.
High, rounded cutouts marked the eyes. These were lined with a simple, thin ornamental border. The eye cutouts join to form a short nose guard.
The aural recesses were small and rounded.
The left helmet side was cut cleanly just below the line of original hinge perforations, and the original rivets were removed. It is unclear whether the inner hinge flap was removed as well.
Small holes line the rim where the cheekpieces, now lost, were once attached.
The long, vertical neck guard ends in a slight flare.

Comparable to Northern Greek helmets now in the British Museum and Olympia (Chalcidian Type II). No comparisons in the Western Caucasus.
Literature: Erlikh 2008, 83; Chernenko 2006, 584; Voronov 1975, 224, Fig. 6, 1-5;

Esh/H-02



A. Esh/H-02, front and right profile.
(after Erlikh 2008, Fig. 1,1)



B. Esh/H-02, front with perforations at forehead and crest, left profile.
(After Voronov 1969, Pl. LXVI, 10)

Helmet type: Chalcidian, Eshera workshop
Find site: Eshera
Find context: From a burial to the north of the Eshera fortifications. The burial was discovered and damaged during road construction work in the area in the late 1960s. The burial also contained black-glaze and local pottery, varied fragments from other helmets.
Dating: The burial is broadly dated from the 5th-3rd centuries BC.[1]
Material: Bronze.
Measurements: H =16, W= 17, L = 25.
Other weapon finds: Further fragments from (other) helmets, including the earflap Esh/Ch -01.[2]
Preservation: The helmet bowl and neck guard were found as separate pieces. The rear of the bowl was damaged, as was the lower rim at the back and left side. The left side was in good shape.
The cheekpieces appear to have been missing.[3]
Nothing can be said about the state of the surface/patina based on the available drawings. No photographs of the helmet are available.

Description: The helmet consists of a semicircular or 'bowl-shaped dome, the form somewhat elongated in profile, The dome covers the head all the way up to the lower brow. Two perforations aligned along the helmet crown indicate the attachment of a decorative element or elements.
The helmet sides are wide and end in a horizontal rim just above the ears. The rim is lined with a series of more-or-less regularly spaced perforations.
The brow section is distinguished by somewhat narrow and shallow cutouts for the eyes. The eye cutouts are embellished with a line of small punched dots, which, in turn, are interspersed at more-or-less regular intervals by perforations of a larger diameter.
The cutouts join in the centre to form an extremely short, pointed nose guard that finishes at the nose bridge.
The neck guard was elongated, with an elegant outward curve, thus distinguishing itself from the line of the helmet bowl. There are no lappets at the sides. The sides are marked by a series of perforations along the edge.
The perforations along the edges of the bowl and neck guard indicate the fastening of cheekpieces without hinges, as well as the attachment of an inner lining.
Earflap Esh/Ch-01 may belong to this helmet.

Comparisons: The helmet is clearly comparable with the other helmets of the Eshera workshop Ver/H-01, Ver/H-02, Ver/H-03.
Location details: Abkhazian State Museum, Sukhum.
Literature: Erlikh 2008; Voronov 1975, 224, Fig. 6: 6-9; Fig. Voronov 1972, Fig. 3: 8-9; Voronov 1969, 50, no. 90, Tab. XLVI,10.

* Unfortunately, the helmet cannot presently be accessed.

[1] Voronov 1969, no. 90.

[2] The other fragments include a cheekpiece and two fragments from a helmet side with ear cutout. Voronov 1972, Fig. 3: 5-6, 9-10; Voronov 1975, 225-226.

Ge/H-01

[Image removed due to copyright restrictions]

A. Ge/H-01, front.
(Photograph courtesy of E. Khachaturova)

[Image removed due to copyright restrictions]

B. Ge/H-01, left profile.
(Photograph courtesy of E. Khachaturova)

Helmet type: Pilos
Find site: Geya
Find context: Unknown.
Dating: Unknown. Probably late 3rd-2nd centuries BC.
Material: Bronze.
Preservation: The helmet was discovered in an extremely fragmented stated and has recently been fully restored.
The surface shows signs of heavy corrosion which mask much of the ornamental detail.
Both cheekpieces have survived.
Description: The helmet form consists of a concical body with gently pointed crown. A wide forehead visor with rounded outer edge runs from ear to ear. The neck guard is short, with a soft outward curve. The neck guard sides are stylised as extremely reduced, rounded lappets that barely fall below the neck guard rim.
The forehead is marked by a high, curved gable formed as a thin, offset ridge. This curves towards the sides into a disc-shaped volute.
The hinge components demonstrate a 1:2 hinge tooth ratio, where the upper hinge tooth is clearly double-riveted.
The cheekpieces are long, with a curved outer-lower edge, and a double-wave line marking the inner edge (where the upper wave is longer than the lower). The cheekpiece fitted with perforation at the bottom edge (for chinstrap).

Comparisons: This helmet is very similar in form to the helmet from Akhtanizovskaya (Akh/H-01) and the helmets from Merdzhany (Mer/H-01, Mer/H-02). (No comparison can be made in terms of the metal composition, as that of this helmet has yet to be determined.)
Location details: Krasnodar State Museum of History and Archaeology. Inv. no. KM 5642.
Literature: Unpublished.

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* I am grateful to E. Khachaturova of the Krasnodar State Museum for providing me with access to and inventory information on this helmet.

Gel/H-01



A. Gel/H-01, front.
(Photograph: S. Chandrasekaran)



B. Gel/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi'
Find site: Pshada
Find context: Found near the stanitsa (village) of Pshada within the area of a damaged burial (burial ground). It was brought to the museum in 1984.
Dating: Unknown. Probably 4th century BC.
Material: Bronze.
Preservation: In good shape, only slight damage visible (mainly denting).
Both detachable cheekpieces have survived - the left one in one piece, the right one in fragments. The helmet sides were found damaged - torn along the hinges and then bent inward. The left hinge component and cheekpiece have been restored to their original state. The original tear along the hinge perforations is still visible on the right side. It is unclear whether the inner hinge flap was removed on the right side.
The helmet has been restored to its original shape.
Description: The helmet consists of a high, rounded semi-oval dome which is heavily offset from the lower body. The dome is oval in length, therefore the front appears to peak slightly. yet semicircular in profile. The brow section is marked by an especially high, offset, curved gable. The lower section is vertical with a slight inward slant of the long neck guard, which ends in a sharply slanting outward flare.
The front rim of the helmet body is marked by high, wide, arched cutouts for the eyes. These are framed with a thick moulded ridge that ends at the nose bridge, leaving space for the flat short nose guard, and at the cheekbone just where the cheekpieces begin. The sides are also marked by small, evenly rounded cutouts for the ears which flare outward only slightly, making them quite unobtrusive in comparison to the eye-cutouts.
The detachable cheekpieces were attached to the helmet rim by means of hinges and rivets (four rivets/teeth along the helmet rim, three fitting rivets/teeth along the cheekpiece rim).
Signs of reworking include the deliberate removal (tearing)of the helmet side along the upper rivets of the hinge component.

Comparable to other helmets of the 'Sochi' type.
Location details: Gelendzhik Museum of History and Regional Studies. Inv. no. A_4034, also no. GKM 5899.
Literature: Gelendzhik Museum inventory records.[2]

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[1] The helmet has yet to be analysed for its metal composition.
[2] Inventory records kindly provided by the Director of the Gelendzhik Museum.

Kek/G-01



A. Kek/G-01).
(After Cat. Petersburg 2007, Fig. no. 65)



B. Kek/G-01, right greave in profile.
(After Chernenko 2006, Taf. 33, no. 679)

Greaves type: Classical, full-length
Find site: Kekuvatsky
Find context: Discovered by A. B. Ashik in 1839 in a kurgan burial on the territory of Mirza Kekuvatsky, at the western end of the Yuz-Oba ridge. The burial assemblage included jewelry of massive gold, a variety of weapons, a Thasian amphora and a red-figure pelike.
Dating: The burial assemblage is dated to the 4th century BC based on the above mentioned red-figured pelike.[1]
Material: Bronze.
Single/Pair: pair
Measurements: left greave: L = 40. right greave: L = 41.
Other weapon finds: A Chalcidian helmet (Kek/H-01), a sword with a golden hilt and ca. 300 gold-tipped bronze arrowheads.
Preservation: Very good condition. Some slight damage only to the kneecap section and the lower edges of both greaves, as well as the shinbone section of the left greave. The form is well-preserved, as is most of the original golden-coloured patina. Uneven holes-gaps along the surface are the result of corrosion. A number of surface scratches - most likely the result of modern restoration.
Description: Form: A pair of slender, full-length greaves consisting of a slightly damaged, rounded kneecap section, a wider calf section and a lower leg which narrows towards the ankle and finishes with a minimal outward flare in front. The lateral edges curve in a slight S-shape from the knee towards the outer calf.
Anatomical details: have been rendered in a naturalistic and smooth fashion. The kneecap is a soft triangle, the vastus muscles reduced, soft swells. Both kneecaps and vastus muscles are marked by eroded patches of metal, however the overall forms are visible. Note the difference in size and placement between the respective inner and outer vastus muscles - the long inner, placed slightly lower than the short outer.
The calf section shows minimal damage and is shaped as a soft, prominent swell at the back with softly hammered edges - the calf muscle swell to the sides is minimal. Soft hammered lines mark the protrusions of tibialis and peroneus, as well as a sharply hammered one for the soleus. The soft hammering technique used for these details is comparable to that on Van/G-01.
A long, folded crease along the center of the lower leg denotes the shinbone.
Edges: The greave edges are lined in their entirety with a narrow ornamental border framed by a single and double-chased lines. The upper and lower borders are marked by a line of small, more-or-less even and regularly spaced perforations punched from the inside. Much of the damage along the greave edges is along the perforations. Note that some of the perforations appear to have been enlarged, either through natural damage or intentionally.
Reworking: Note the line of uneven perforations running horizontally below both knees. Those of the left greave are partially enlarged due to corrosion. The right knee is further

marked by the slight traces of a corroded line or furrow, perhaps the result of some kind of tie/binding.
Summary: The distinguishing features of this greave pair are the slender overall form with prominent shinbone crease, reduced bulge of the calf muscle contained towards the back, and the soft, reduced working of anatomical details. Note also the assymetrical size and placement of inner/outer vastus muscles and signs of reworking - perforations and furrow - below the knees.
Compare with: Van/G-01; The fashioning of knee details is reminiscent of the greaves from Derveni.

Location details: State Hermitage Museum, St. Petersburg. Inv. no. Kek. 6.
Literature: Aleksinsky Chernenko 2006, no. 679; Gaidukevich 1971, 276-277; Galanina 1965, no. 1.

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[1] Butyagin (2008, 12-13) places the Kekuvatsky barrow in the mid-4th century BC based on its proximity and similarity with the Kul-Oba kurgan.

Kek/H-01



A. Kek/H-01, three-quarters-view from left.
(Photograph: State Hermitage website)

[Image removed due to copyright restrictions]

B. Kek/H-01, right profile.
(Photograph courtesy of D. Aleksinsky)

Helmet type: Chalcidian type V
Find site: Kekuvatsky
Find context: Discovered by A. B. Ashik in 1839 in a kurgan burial on the territory of Mirza Kekuvatsky, at the western end of the Yuz-Oba ridge. The burial assemblage included jewelry of massive gold, a variety of weapons, a Thasian amphora and a red-figure pelike.
Dating: 4th century BC. The burial itself is also dated to the 4th century BC based on the find of a red-figured pelike from the burial assemblage.
Material: Bronze. The golden hue of the helmet surface is the result of a relatively high tin content (12%).
Measurements: H (with cheekpieces) = 30.6; L = 21.8; W = 17.6cm; cheekpiece L = 12.3; metal thickness = up to 0.10 for the dome, up to 0.20 along the edge of the neck guard, and up to 0.60 for the nose guard.
Other weapon finds: A pair of greaves (Ke/G-01).[1] Also a short sword (akinakes), a mass of bronze arrowheads
Preservation: Discovered in good shape. Damage included a missing section of the forehead/brow, together with a small hole in the front of the dome and a missing right cheekpiece. Traces of denting and previous discolouration still visible along the dome. Parts of the left cheekpiece lower section were originally missing.
The helmet has been fully restored (with the exception of the missing cheekpiece).
Description: The helmet form consists of an ellipsoidal dome set atop a lower body of smaller diameter, from which it is distinctly offset.
The helmet dome is ellipsoidal at the base. The sides narrow as they rise, resulting in a softly rounded upper edge running from front to back of the dome. Thus the helmet dome appears to peak from the front, yet remains semicircular in profile.
The forehead section of the dome is offset to form a elegantly curved, high gable. The gable form is exactly the same as that of the helmet Kur/H-01.
The lower helmet section falls vertically.
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The rather shallow eye cutouts are wide and almond-shaped. They are framed by an ornamental border of metal folded over and hammered almost flat, resulting in only a slight degree of offsetting.
The eye borders are slightly crescent-shaped, peaking above the pupil and narrowing towards the edges. The same border thin at the nose bridge and continue along the nose guard.
Note: the eye borders have been pressed inwards, resulting in a slight inward/downward slant, thus reducing the optical illusion of large eyes created by the cutouts themselves.
The ear cutouts are rounded and narrow towards the bottom. They are marked only by a slight flare of the edges.
The helmet rim is marked at the centre by a short, rounded, diamond-shaped nose guard.

The neck guard is long, The back is formed as a large, elegant outward curve ending in a slight flare of the rim at the nape of the neck. The neck guard sides droop into long, rounded lateral lappets which hang below the nape and curve forward towards the cheekpieces.
Both upper hinge components as well as the lower one on the left cheekpiece are only slightly damaged, with most of the riveting and four of the 'teeth' still intact. Part of the left hinge pin (of bronze?) is also visible. The right hinge pin has not survived.
The hinge component is a 4:3 construction.
The cheekpiece is a long softly rounded tongue which curves forward.
Note: the metal surface was polished to a ***golden*** colour, not silver, as in most cases.

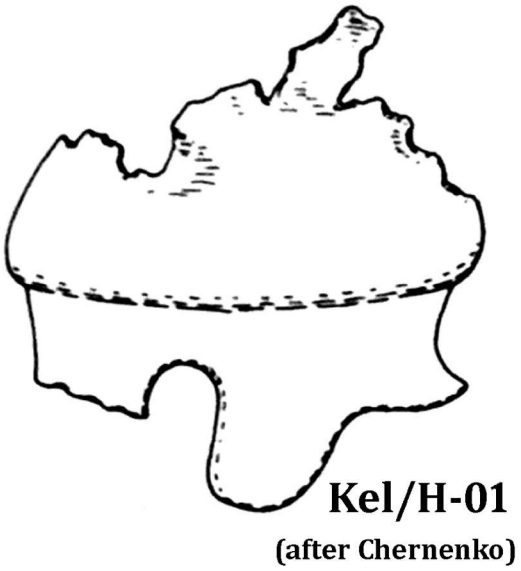
Compare with the helmets from Kurdzhips Kur/H-01, Kur/H-02 and Kur/H-03. Also comparable with helmets from Greece (Tithorea).

Location details: State Hermitage Museum, St. Petersburg. Inv. no. Kek.5.
Literature: Aleksinsky 2007, no. 61; Chernenko 2006, no. 561; Rabinovich 1941, 142 -143.

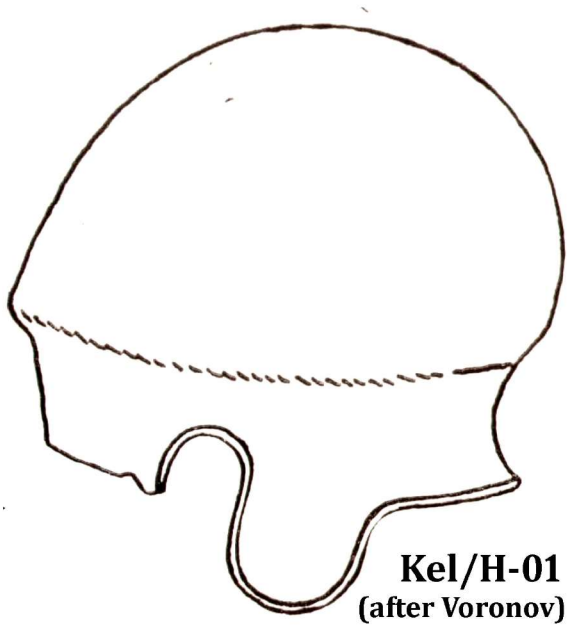
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* I am extremely grateful to Dmitry Aleksinsky for providing me with detailed photographs of this helmet, which was on exhibit elsewhere at the time of my visit to the Hermitage.
[1] Rabinovich 1941, 142.

Kel/H-01



A. Kel/H-01, left profile.
(After Chernenko 2006, Taf. 28, no. 581)



B. Kel/H-01, left profile.
(After Voronov 1969, Tab. XLVI, 9)

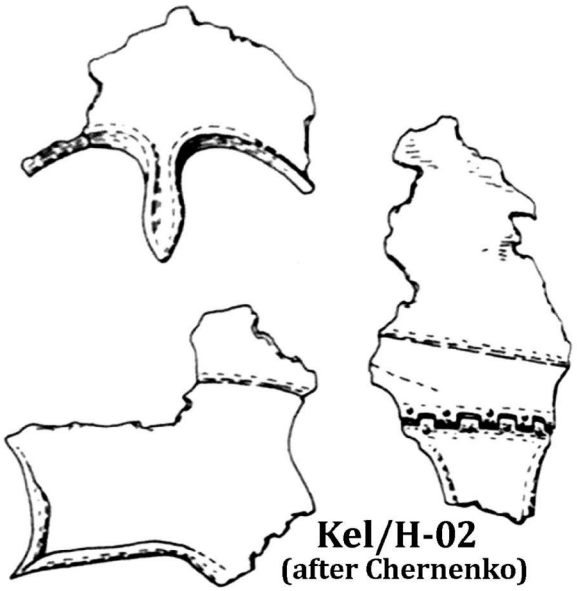
Helmet type: Chalcidian type V
Find site: Kelasuri
Find context: Washed up (sometime before 1939) from one of the burials of the ancient necropolis along the right bank / mouth of the Kelasuri River (Sukhum outskirts).
Dating: Unknown.[1] Probably 5th-4th centuries BC.
Material: Bronze.
Preservation: Only the left half of the severely damaged helmet dome is preserved - the bulk of the upper and right sections are missing.[2]
Description: The helmet form consists of an semicircular dome set atop a lower body of smaller diameter, from which it is clearly offset.
The helmet dome is ellipsoidal at the base. Its shape is similar to that typical of the Chalcidian type V helmets in general.
The forehead was also offset from the lower helmet body. Nothing can be said about any possible gabling at the forehead.
Nothing can be said about eye cutouts or a nose guard.
The helmet body is short and falls vertically.
The left side of the helmet rim is marked by an arched, circular ear cutout marked by a slight flare of the edges.
The neck guard is short and concave. The left neck guard side droops into a short, rounded lappet.
None of the hinge components or cheekpieces have survived.
The helmet side is damaged just at or slightly above the cheekpiece riveting. The wavy damaged rim is marked by three curved 'indentations', perhaps remains of the original riveting. This would indicate a hinge tooth ratio of 3:2.

The discernible helmet features are comparable with those of the standard Chalcidian type V helmets found in the Western Caucasus and elsewhere.
Location details: Abkhazian State Museum, Sukhum.
Literature: Erlikh 2008, 82; Chernenko 2006, no. 581; Voronov 1991; Voronov 1975; Voronov 1969, no. 158, Pl. 56.9.

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* Unfortunately, the helmet is currently inaccessible due to renovation of the Abkhazian State Museum. The only images available are the drawings included here.
[1] Voronov (1975, 224) dates the helmet to the turn of the 4th to 3rd century BC based on the similarity to other finds of this period.
[2] Chernenko 2006, no. 581.

Kel/H-02



A. Kel/H-02, in three fragments.
(After Chernenko 2006, Taf. 28, no. 582)



C. Kel/H-02, fragment with facial features.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type V
Find site: Kelasuri
Find context: Washed up (sometime before 1939) from one of the burials of the ancient necropolis along the right bank / mouth of the Kelasuri River (Sukhum outskirts).
Dating: Unknown.[1] Probably 5th-4th centuries BC.
Material: Bronze.
Preservation: Only three fragments of the helmet survive. These include the forehead section of the helmet body with nose guard, part of the left side preserving the helmet dome and lower section with attached hinge component upper cheekpiece, and the neck guard with damaged lappets.

Description: The distinct offsetting of the dome from the lower section is clearly visible.
The helmet body is short and falls vertically.
The forehead section is marked by arched cutouts for the eyes, which join at the centre to form a short nose guard of an elongated teardrop shape, similar to that of Kel/H-03 and reminiscent of the Kekuvatsky helmet Kek/H-01.
The shallow eye cutouts are wide and almond-shaped. They are framed by a somewhat wide ornamental border (created by folding over and flattening the metal edge). The resulting border is only slightly offset from the helmet body.
The borders follow the curve of the cutout arches, peaking near the nose bridge and narrowing towards the outer edges. The edges also narrow into the nose guard just below the nose bridge and form a thin frame along the edges of the nasal guard.
Note: the eye borders have been pressed inwards, resulting in a slight inward/downward slant, thus reducing the optical illusion of large eyes created by the cutouts themselves.
The overall shape of the eye cutouts and the inward slant of their edges is reminiscent of the helmet from Kekuvatsky Kek/H-01.
A small portion of a rounded aural cutout survives.
The neck guard is somewhat long and distinguished from the dome by its distinct inward curvature which ends in a short, flared rim at the nape of the neck. The neck guard sides droop to form short, rounded lappets which hang below the nape and curve forward.
The left hinge component is fully preserved, with only slight damage at the outside edges. All five of the upper rivets (or their holes) as well as the four lower ones are still visible, together with the respective hinge 'teeth. Whether the hinge pin has survived remains unclear.
This is the only example of a 5:4 hinge tooth ratio.
The surviving upper part of the left cheekpiece curves inward and is narrow, suggesting a long softly rounded tongue which curves forward.

This helmet is comparable to other helmets of the 'standard' Chalcidian type V, both within the Western Caucasus and from Greece.

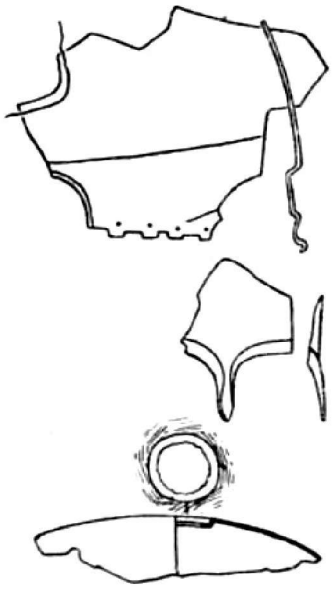
Location details: Abkhazian State Museum, Sukhum.
Literature: Erlikh 2008, 82; Chernenko 2006, no. 582; Voronov 1991; Voronov 1975, Fig. 6.13, 6.16, 6.18; Voronov 1969, no. 158, Pl. 56.7-8; Rabinovich 1941, 145-6, Pl. 16.

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* Only one of these fragments has been exhibited and could be photographed. The others are currently inaccessible due to renovation work at the museum. The only available images of the other fragments are the drawings shown here.

[1] Voronov 1975, 224 - Dated to the turn of the 4th century BC based on the similarity to other finds of this period.

Kel/H-03



A. Kel/H-03, in three fragments.
(After Voronov 1975, 6.15, 6.19-6.20)

Helmet type: Chalcidian type V
Find site: Kelasuri
Find context: Washed up from one of the burials of the ancient necropolis along the right bank or mouth of the Kelasuri River (southern outskirts of Sukhum).
Dating: Unknown.[1] Probably 5th-4th centuries BC.
Material: Bronze.
Preservation: Preserved in three fragments: the upper section of the helmet dome with a perforation in the middle, the mid-forehead section with nose guard and part of the eye cutouts, and the right side of the helmet including the dome and upper hinge component. No portion of the neck guard or cheekpieces has survived.
Description: The dome was semicircular in shape and set upon a lower section from which it was offset. The degree of offsetting is uncertain.
The upper dome fragment contains a roughly rounded perforation, suggesting the attachment of an ornament at the helmet crest.
The lower helmet section was relatively short with a vertical fall. The left edge reveals part of a relatively high, arched aural recess. The right edge reveals a small section of the shallow ocular cutouts.
The small remainder of the forehead section is marked by the inner parts of shallow, almond-shaped cutouts for the eyes, which join at the centre to form a short nose guard of an elongated tear shape. Cutouts and nose guard are similar to that of Kel/H-02 and reminiscent of the Kekuvatsky helmet Kek/H-01.
The eye cutouts are framed by a rather wide, ornamental border created by folding the metal sheet over and hammering it flat, similar to Kel/H-02. Whether the ornamental border is distinguished from the helmet body by offsetting or an engraved line remains unclear.
The ornamental border follows the curve of the cutout arches as they curve into a nose guard and narrows as it joins the latter *below* the nose bridge to form a thin frame along the nose guard edges. This latter feature is particularly interesting, as the ornamental border of the eyes generally narrows into the nose guard at the nose bridge in most cases.
It is unclear whether the eye borders slant slightly inward/downward.
Of the hinges, the teeth of the upper component appear to be fully preserved. A total of four teeth and four rivet holes are visible. To what extent the inner section of the component has survived is uncertain. No traces of the actual rivets or hinge pin have survived.
Particularly interesting is the fact that there appears to be no outer upper hinge tooth on the left side of the component. The drawing does not reveal whether this outer tooth might have broken off. If the tooth is truly missing, then this would be a unique example of a hinge component without an upper tooth at an outer edge.
The hinge tooth ratio appears to be 4:4. This is unique amongst all hinge components in this catalogue.

Location details: Abkhazian State Museum, Sukhum.
Literature: Erlikh 2008, 82; Chernenko 2006, no. 583; Voronov 1991; Voronov 1975, 224, Fig. 6.15, 6.19-20.

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* It was not possible to access these fragments due to renovation work being carried out at the museum. The only available images are the drawings shown here.
[1] Voronov 1975, 224 -Dated to the turn of the 4th century BC based on the similarity to other finds of this period.

Ker/G-01



A. Ker/G-01.
(Photograph: Hermitage website.)

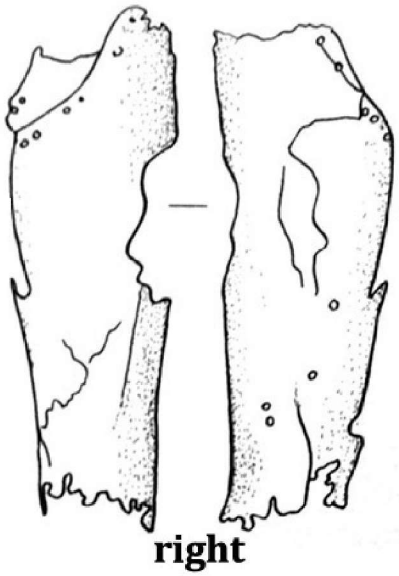
Greaves type: Classical, full-length
Find site: Kerch, kurgan 1838
Find context: The kurgan, located along Karantinnoye Shosse (Quarantine Road) by Kerch, was excavated by A. Ashik in 1838. The chamber tomb contained the burial of a 'warrior'. Finds included two amphoras and some weapons.
Dating: The burial is dated by the amphoras to the 4th century BC.
Material: Bronze.
Single/Pair: pair
Measurements: H = 47.
Weight: ca. 400.
Other weapon finds: A sword, a helmet, armour scales, greaves, varying types of arrowheads. Particularly interesting is the helmet, which was fabricated solely of reused metal strips.
Preservation: Discovered in a very fragmented state, the greaves have now been almost completely restored.
The left greave is more complete than the right, where portions of the kneecap and upper shin are missing. The lower leg is cut/torn away on both greaves.
The metal was subject to heavy oxidation.
Description: Form: A highly decorative pair of full-length greaves consisting of a slightly angular kneecap section, a wide, well-pronounced calf section and a lower leg which narrows towards the ankle. The lateral edges fall from the knee in an angular S-shape to the outer calf.
Anatomical details: are highly stylised. The kneecap itself is with a stamped Gorgon head. The vastus muscles are two heavy sausage-shaped and practically symmetrical bulges.
The calf section is emphasised with a series of thin, hammered ridges which rise from the soleus and peroneus to spiral, volute-like, at the calf muscles.
The outer edges of the shinbone are marked by a double-crease hammered into the metal following the natural bone shape. The result is a wide, flat bone shape.
Edges: The greave edges are lined with a series of tiny, regularly spaced perforations.
Summary: The distinguishing features of this greave pair are the highly stylised overall form, and, even more so, the elaborate decoration with the stamped Medusa ornament at the knees.

Comparisons: This greave pair is clearly belongs to the workshops of the 5th century BC. It can best be compared with the greave pair from Ruvo (British Museum, Inv. no. GR 1856).
Location details: State Hermitage Museum, St. Petersburg. Inv. no. P 1838.65.
Literature: Chernenko 2006, no. 681; Kunze 1991, 62, 115; Galanina 1965, no. 3; Six 1885, 284; DBK, 182, 196-8, Pl. XXVII, 7.

Ker/G-02

[Image removed due to copyright restrictions]

A. Ker/G-02, left from front and right in profile.
(Photograph: S. Chandrasekaran)



B. Ker/G-02, right greave from both sides.
(After Chernenko 2006, Taf. 33, no. 682)

Greaves type: Classical, full-length
Find site: Kerch
Find context: Kerch, i.e. ancient Pantikapaion. The find site and context are unknown.
Dating: Unknown.
Material: Bronze.
Single/Pair: pair
Preservation: Both greaves survive in decent condition, in spite of the intensive reworking of the original full-length form. The kneecap sections were removed, the lower shinbone and inner calf areas were torn or cut out. Most of the lower edges have also been removed. Other edges are partially damaged.
The metal retains signs of former corrosion which has now been cleaned. Sections of the original golden-coloured patina are now visible.
Description: Greave pair.
Form: A pair what were once full-length greaves with subtly hammered anatomical details. Nothing can be said of the kneecap shape. The calf section was clearly slightly wider, but has been narrowed down by the removal of the inner calf section. The lower leg tapers somewhat towards the ankle.
Anatomical details: Visible details include the softly hammered line of the inner soleus.
Edges: All surviving edges are lined with an ornamental border consisting of two parallel chased lines.
Reworking: In addition to the deliberate removal of the kneecaps, inner calf, lower shinbone and bottom edges, a row of large, rather regularly spaced yet unevenly shaped perforations was added to the resulting upper greave edges. The upper lateral edges (between kneecap and outer calf), which were not fully torn away, were lined with a set of double-perforations. Individual additional perforations are also found at the outer edges of both greaves along the lower leg. Finally, smaller holes below the inner calf of the right leg suggest repair work.

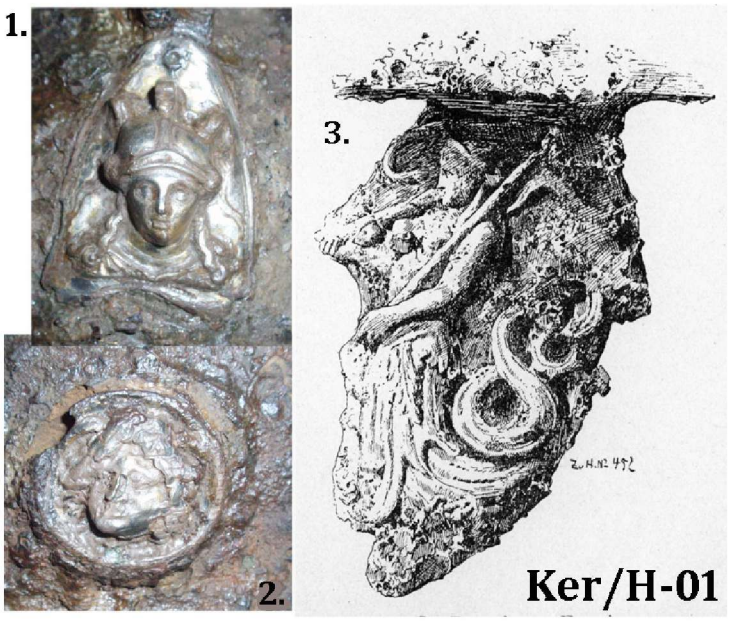
Summary: These greaves are a characteristic example of reworking as it frequently occurs in the Western Caucasus. Nothing similar is known from Greece or Southern Italy.

Location details: State Hermitage Museum, St. Petersburg. Inv. no. PAN 102.
Literature: Chernenko 2006, no. 682; Galanina 1965, no. 6.

Ker/H-01



A. Ker/H-01, three-quarters-view from left.
(After Cat. Petersburg 2007, Fig. no. 60)



C. Ker/H-01, helmet details. 1. forehead application depicting Athena. 2. Gorgoneion in volute at the helmet side. 3. Left cheekpiece with figure ornament in relief.

Helmet type: Attic type with visor
Find site: Kerch, kurgan 1834
Find context: Excavated from a 'warrior' burial in a small kurgan near the 'Karantinnoye Shosse' by A. B. Ashik in December 1834. The burial contained the remains of a 'male warrior' and 'female' burial with numerous gold finds, pottery and weapons.
Dating: The burial is dated to the 1st half of the 3rd century BC based on the golden stater of Lysimachos and a black-glazed pelike.
Material: Iron, with silver appliques. Traces of gold on the appliques. Traces of a wooden core/inlay along the inside of the helmet crest.
Measurements: H = 22, L = 30, W = 22.
Other weapon finds: An iron sword, a bronze shield.
Preservation: Found in a heavily corroded but otherwise fairly good condition. The helmet surface is heavily deformed due to the severe corrosion. The image features of the appliqués are quite worn.
Some traces of gold plating have survived.
The lower rim of the helmet body (below the visor) is damaged/torn off, especially on the left side. The upper hinge components are missing.
The edges of both cheekpieces are damaged to varying degrees, as is much of the lower left cheekpiece. Nothing remains of the lower hinge components.

Description: The helmet form consists of a large, ellipsoidal helmet dome with ornamental crest set atop a short lower section that is accented with a rounded visor in front and sides.
The top of the dome is crowned by a wide, hollow crest which grows out of the top of the neck guard and along the medial to the top of the forehead, where it reaches its full height. Wooden remains were found in the hollow area.
The centre of the dome is marked with a triangular, silver relief applique depicting an Athena bust. Athena wears a triple-crested helmet, her hair falls in two long curls to either side of the face.
The transition from upper to lower section of the helmet is hidden by a gabled forehead section. The wide, triangular gable section is offset from the upper and lower helmet body and consists of thickly moulded ridges marking both the gable and the lower, horizontal line. The ridges of the ornament continue into the helmet sides, where they join together to curl into a volute ornament.
The centre of each volute is filled with a silver relief medallion depicting a Gorgon.
The lower walls of the helmet body fall vertically. The body itself is mostly hidden by the gable and a distinct visor, from under which the lower rim is just visible.
The visor is of ample width and slight downward slant. Its rounded outer edge runs from the back of one ear to the other, thus offering protection for both front and sides.
The helmet neck guard is separated from the remaining upper helmet section by a thick, offset horizontal ridge running along the helmet rear between the gorgoneions.

The neck guard is short and falls vertically, finishing off with a sharp, horizontal flare into a wide rear brim. The neck guard sides form short, rounded lappets.
X-ray analysis has revealed what appears to be an ear-shaped ornament, slightly offset, marking the lateral edges of the neck guard.
No part of the hinge components has survived.
In spite of the cheekpiece damage, it is possible to make out their original shape - fairly long and curved, the outer edge rounded, and the inner cut into a wavy line.

Comparisons: While this helmet is unique in the Western Caucasus (and the Black Sea area in general), close parallels with a Hellenistic dating are found in Greece. These include the helmet from Melos (Berlin, Antikensammlung) and, in particular, a helmet from Prodomi (Athens, National Museum).[2]

Location details: State Hermitage Museum. Inv. no. P1834.42.
Literature: Aleksinsky 2008; Aleksinsky 2007, no. 60; Chernenko 2006, no. 594; Waurick 1988, 170-172; Dintsis 1986, Cat. no. 215; Rabinovich 1941, 152-154, Fig. 23; Schröder 1912, 328, Suppl. 13, 4.5; DBK 1854 I, LXIV.

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* I would like to thank D. Aleksinsky of the State Hermitage for providing me with his latest, detailed article on this helmet and its find context, together with a number of detailed images.

Kho/H-01

[Image removed due to ethical restrictions]

A. Kho/H-01, front.
(Photograph: S. Chandrasekaran)

[Image removed due to ethical restrictions]

A. Kho/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Khosta workshop
Find site: Khosta Region
Geographic location: In the Greater Sochi area.
Find context: Burial (by report).
in the Khosta area. The complex was illicitly excavated and the finds removed - the whereabouts of most remain unknown.
Dating: Unknown. Probably 4th century BC.
Material: Bronze with (partially?) silver-coloured surface.
Measurements: 26x16.4cm
Other weapon finds: One iron spearhead.
Preservation: Discovered as a heap of small and large fragments which had retained very little of their original metal core, i.e. had lost their original resilience, making their reconstruction quite difficult. While most of the actual helmet dome and body could be reconstructed, the cheekpieces and neck guard are incomplete. .
Note that both cheekpieces were torn off just beneath their hinge components.[1]
Most of the fragments still showed traces of the original patina. Only the front side revealed traces of a silvery surfacing.
Helmet conservation was carried out by the Stavropol Archaeological Research Institute 'Nasledie' in 2003.
Description: The helmet consists of an elongated dome which is clearly offset from the long helmet body of a somewhat smaller diameter.
The base of the dome is oval-shaped. The sides bulge at the bottom before narrowing pointedly towards the top, resulting in a distinct upper edge that runs from front to back (and a frontal shape of an elongated acorn shell).
The forehead section of the dome is offset to form an extremely wide, shallow, squarish gable with the shortest of indentations.
The helmet body is long, its sides fall vertically and slightly outward.
The front and sides of the helmet rim are marked by cutouts for both the eyes and ears.
The eye cutouts are formed as relatively shallow arches. The ear cutouts, on the other hand, consist of high, elongated arches.
The eye cutouts are framed by a wide and somewhat rounded offset edge, which narrows as it reaches the nose guard, but otherwise retains its width. Interestingly, the offset edge is ornamented: a line of small punched circles runs along the centre of the entire ornamental edge and ends as they reach the nose guard.
The ear cutouts are distinguished only by a slight outward flare of the edges.
The cutout eyes join to form a narrow, elegantly shaped long nose guard that finishes with in a soft oval. It is characterised by an incised line bordering its edges and the series of small punched circles running down its middle, similar to the ornament along the eyes.
Note that this ornament continues along the lower rim of the helmet and finishes where the ear cutouts begin.

The neck guard, like the remaining helmet body, is long and vertical, with a slight outward slant. It finishes by flaring into a wide rim that is narrower than that of the Soc helmets. It is not completely horizontal, but drops slightly.
Both cheekpieces are partially preserved, together with their respective hinges.
The hinge component, together with all hinge teeth, is well preserved on both sides. The hinge tooth ratio is 4:3. Note that while the lower hinge flap was triple-riveted to the cheekpiece, the upper flap appears to have only been hammered close to the inner helmet surface, i.e. without the use of additional rivets.
Only the upper edge of the right cheekpiece,is fairly intact, together with its hinge component. Traces of the hinge pin are also preserved around the hinge teeth.
Note that the upper edge of both cheekpieces is also lined with the same decorative punched circles described above. The rivets have also been aligned with this ornamental line.

Comparisons: This helmet is almost identical to Nov/H-01 and must stem from the same workshop. Note the identical ornament on both, amongst other parallels.
Location details: Khosta 'Regional Museum' - private collection.
Literature: Restoration records - 'Nasledie' (Stavropol).

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[1] This could indicate intentional damage.

KO/G-01

[Image removed due to copyright restrictions]

A. KO/G-01, left greave, front - outer profile - rear - inner profile.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kul-Oba
Find context: The Kul-Oba kurgan was excavated by P. Dubrux, A. B. Ashik and V. D. Kareisha in 1830.
Dating: The burials in the tomb are dated from anywhere from the 5th-3rd centuries BC, with the general concencus of the 4th century BC.[1] The greaves are generally dated to the 4th century BC.Butyagin places the tomb in the mid-4th century BC based on its location away from the coast.[2]
Material: Bronze.
Single/Pair: single
Measurements: L = 41.5
Other weapon finds: A helmet, another pair of bronze greaves, a sword, a whip, a war belt, hundreds of arrowheads, iron spearheads and knives. Note that no further trace of the helmet and second pair of greaves exists since their first mention.[3]
Preservation: Originally found as a pair. Only the left greave has survived. The right greave was kept at the Kerch Historical Museum and lost during the Second World War.
Some damage to the kneecap section, otherwise in excellent shape. The surface retains much of its smooth polish and original golden-coloured patina.
Description: Left greave only.
Form: A relatively slender, form-fitted full-length greave with damaged kneecap section, wide calf and narrowing shin, which finishes with an elongated yet slight outward flare to the front. The lateral edge is cut in a soft diagonal between knee and outer calf.
Anatomical details: The rendering of anatomical details is very naturalistic and smooth.
The kneecap is given as a relatively flat triangle with only the upper edge jutting forward.
The partially preserved outer vastus swells only slightly. The inner vastus section is damaged.
The calf muscle is an realistically rounded bulge contained mainly to the back.
The soleus is designated as a long, soft swell, the tibialis and peroneus as two elongated yet less discernable swells.
The shinbone is a wide, rounded vertical fold.
The cut of the upper edges is almost a straight diagonal to the sides. The bottom edge is rounded at the sides, curving upward towards the back. All greave edges are smoothly cut and have no ornamental border or perforations.
Reworking: The missing kneecap section is very likely the result of deliberate removal and can be considered a form of reworking.

Summary: The most prominent features of this greave are the pronounced tapering of the lower leg, the extremely reduced, smoothly-worked swells and transitions of the anatomical details, containment of the calf muscle to the back, and the wide-folded shinbone. Particularly interesting is the lack of ornamental border and perforations along the edges.

Location details: State Hermitage Museum, St. Petersburg. Inv. no. KO 107.
Literature: Vlasova 2011, 122-124; Du Brux 2010; Chernenko 2006, no. 680; Galanina 1965, no. 2; DBK Vol. I, XX.

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[1] Vlasova 2006.
[2] Butyagin 2008, 12.
[3] Vlasova 2011, 122.

Kok/H-01



A. Kok/H-01, front.
(Photograph: S. Chandrasekaran)



A. Kok/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type V
Find site: Kokhi
Find context: Uncovered in 1958 during road construction in the village of Kokhi, on the Kintrishi River ca. 20 km east of the Pichvnari site and 14 km from the coast, in the foothills of the Lesser Caucasus near Kobuleti.
The helmet was part of sparse burial assemblage that included a Colchian amphora and a dagger.
Dating: End of the 4th century BC, based on the amphora found in the same burial.[1] This also suits a dating of 4th-3rd centuries BC for the helmet based on the similarity with the helmet from Temnolesskaya (Tem/H-01).
Material: Bronze.
Other weapon finds: Iron dagger.
Preservation: Heavily deformed. The dome is characterised by its bloated appearance, the result of a huge gaping hole and walls bent severely out of shape, as if it once covered an enormous head.
The right section of the neck guard is also missing, together with most of the right ear section.
Other damage includes smaller missing fragments, small holes, tears and traces of heavy denting.
The cheekpieces were reported to have been preserved, but were not available at the Adzhara Museum for study.
The metal has also suffered serious oxidation and corrosion, and is worn away or chipped in many places. The helmet has only undergone provisional conservation measures and has yet to be restored.

Description: The helmet consists of a severely damaged, rounded dome set atop a lower section of smaller diameter, from which it is offset.
The dome rises from an egg-shaped base, wider in the face and narrow at the back. What remains of the walls bulges outward at the base before turning rather sharply inwards at the level where the gable peaks. Two uniformly formed holes at the base near the right hinge indicate repair work.
The forehead section of the dome is offset to form a wide, elegantly curved, high gable, which is still visible on the left side. Note that the offsetting of the dome from lower section, both at the gable and elsewhere, is not very pronounced. This is the result of (deliberate?) damage to the helmet.
All sides of the long helmet body fall vertically.
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are wide and shallow. They are framed by a wide ornamental border - of folded-and-flattened metal - which is only minutely offset from the helmet body. The ornamental border peaks above the eyes and narrows towards the inner and outer edges.

The same border continues into the nose guard, thinning below the nose bridge and framing the nose guard to the tip.
Note: the eye borders are pressed inwards, resulting in a slight inward slant, thus reducing the optical illusion of large eyes created by the cutouts themselves.
The ear cutouts form an almost complete circle. They are marked by a slight flare of the edges.
The nose guard is short, thick, and tear-shaped.
The neck guard is fairly long, falling vertically and finishing with a short, curved flare at the end. The neck guard sides droops forward into a short, rounded lappets hanging below the flared rim.
The helmet sides were cut rather evenly just below the line of the original rivet perforations, only two of which survive on the right helmet side. This is not enough to reconstruct the hinge tooth ratio.
Each helmet side displays an arched row of six roughly sized perforations, larger than the original rivet holes. These are of secondary nature and indicative of reworking.
The cheekpieces are also not preserved.

Comparisons: In spite of the heavy damage, this helmet is clearly practically identical to the helmet from Temnolesskaya (Tem/H-01).[1]

Location details: Adjara State Museum. Inv. no. 17523.
Literature: Chandrasekaran 20010; Kvirkvelia 2002, 235; Tsetskhladze 1999, 73-74ö Katamadze 1963.

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* I am grateful to Dr. Nino Iniashvili and the Director of the Adzhara State Museum for arranging for me to examine the Kokhi helmet and other finds more closely.
[1] See Chandrasekaran 2009 for a full comparison of the helmet with the helmet from Temnolesskaya.

Kur/G-01

[Image removed due to copyright restrictions]

A. Kur/G-01, left from the front, right in inner profile.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze - relatively thick metal sheet.
Single/Pair: single, probably left
Measurements: L=30.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-08).
Preservation: In a relatively battered yet decent state of preservation. Severe denting and bending of the metal. Much of the damage - missing kneecap, lower edge and one of the back edge - is due to ancient reworking of the greaves. The surface was originally heavily corroded, but this has been cleaned (this process has left modern scratches on the metal surface), revealing patches of the original golden-coloured patina.
Description: Single greave, probably for the left leg. Found paired together with the single right greave Kur/G-02. Galanina (1980, 100, no. 74) notes that this is a secondary pairing of greaves of differing make.
Form: A damaged/reworked example of a full-length greave. The kneecap section removed asymetrically. One of the back edges cut cleanly along the line of the original ornamental border. The lower edge also removed at the line of the ornamental border. The greave far too dented and bent out of shape to ascertain the details of the original form, or whether it belonged to the right or left leg. The lateral edge curves from the knee to the outer calf.
Anatomical details: Only a slight jutting of the upper knee and the wide vertical form of the shinbone remain visible. None of the other anatomical details are discernible.
Edges: Most of the lateral edges survived the removal of the kneecap section (one edge fully, one in part). The lateral edges are cut curving upward from calf to knee.
The greave's left rear edge has survived. All surviving original edges are lined with an ornamental border of two parallel chased lines set some millimeters away from the edge, which is poorly visible in sections due to corrosion. Note that this border was not lined with perforations in its original state.
Reworking: The many signs of reworking include the above-mentioned removal of the kneecap, resulting in a serrated edge. A similar serrated edge is found along the lower edge. The greave's right edge appears to have been more-or-less cleanly cut along the chased line

of the now-missing ornamental border.
Roughly shaped perforations of varying size (4-7 mm) - were added along the greave edges after these were cut. Some were punched from the inside, some from the outside, and the larger ones appear to be hand-cut. Those along the top and bottom edges are spaced reguarly, alternately in pairs or as singles, and roughly lining up with those of the opposite edge. The middle section of the right rear edge is embellished with a few smaller perforations punched from the inside and spaced regularly. One of them contains the remains of a bronze fastening.
The upper corner, middle and lower corner of the greave's left rear edge were each marked by a single large perforation.

Summary: The most prominent feature of this greave is its reworking, in particular the removal of the kneecap. The aspects of reworking are typical of what is found in reworked greaves of the Western Caucasus. The perforations are indicative of the addition of an inner lining, or perhaps also of fastenings to provide a better fit.
Location details: State Hermitage Museum. Inv. no. 2495_45.[2]
Literature: Chernenko 2006, no. 689; Galanina 1965, 13, no. 26, Fig. 3,1-2; OAK 1898 (for 1896), 61.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.
[2] Galanina (1965, no. 26) gives the older inventory number Ku 1895 4/47 for this pair.

Kur/G-02

[Image removed due to copyright restrictions]

A. Kur/G-02, front.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze - relatively thick metal sheet.
Single/Pair: right greave
Measurements: L = ca. 27.5.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-08, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: Only the one third of the greave survives, i.e. most of the right side with the exception of the kneecap section. Found in a similarly fragmented state as its counterpart Kur/G-01, with which it was paired.
The surviving metal is severely denting and deformed. At least some of the damage - i.e. the missing kneecap - was the intentional result of reworking.
The surface was originally heavily corroded, but this has been cleaned reveal of the original golden-coloured patina.
Description: Right greave. Found paired together with greave Kur/G-01. Galanina notes that this is a secondary pairing of greaves of differing make.[2]
Form: An extremely damaged example of a full-length greave which has been reworked and of which very little remains. The kneecap section, shinbone and all of the outer greave are missing, therefore making it impossible to ascertain the full details of the original form or the extent of its reworking. What remains reveals the part of the wide calf section and the remains of a narrowing lower leg. The shape of the lateral edge remains unclear.
Anatomical details: The rather deformed swell of the inner calf muscle is discernible. However, it is impossible to make out any other anatomical details. A small rounded protrustion along the surviving pointed upper edge may also belong to the calf muscle.
Edges: A part of the lateral edge survives, together with all of the vertical rear edge and a small section of the curved lower edge. All edges are cleanly cut. The lateral edge is slightly curved. Note the lack of any ornamental border lining the edges of this greave, unlike its counterpart Kur/G-01. The few perforations along the edge are of secondary nature (reworking).
Reworking: The signs of reworking are limited to the perforations along the lateral edge and lower corner - large, single ones along the respective corners, and smaller ones in pairs

along the edges. All perforations were punched from the outer side. Note that these perforations do not correspond to those on the counterpart greave Kur/G-01.

Summary: The most prominent feature of this greave, aside from the secondary perforations, is its striking difference from its counterpart greave Kur/G-01.
Location details: State Hermitage Museum. Inv. no. 2495_45.[3]
Literature: Chernenko 2006, no. 689; Galanina 1965, 25-26, no. 26, Fig. 3,1-2; OAK 1898 (for 1896), 61.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.
[2] Galanina 1980, 100, no. 74.
[3] Galanina 1980, 100, no. 74. Galanina (1965, no. 26) gives the older inventory number Ku 1895 4/47 for this pair.

Kur/G-03

[Image removed due to copyright restrictions]

A. Kur/G-03, greave pair.
(Photographs: S. Chandrasekaran)

[Image removed due to copyright restrictions]

B. Kur/G-03, additional fragments.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Single/Pair: pair
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-08, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: Found in a very fragmentary condition. The fragments have undergone simple surface cleaning and either taped together from behind or fastened around a wire skeleton with plastic moulding, thus restoring the general form of both pieces. Not all of the fragments could be reassembled - e.g. the kneecap sections and part of the sides.
The surfaces are extremely corroded and oxidised, and anatomical details are extremely difficult to make out. Nothing of the original patina is discernible.
Description: Greave pair, with many additional fragments.
Form: Heavily damaged remains of a pair of full-length greaves. Both kneecap sections were removed, yet a number of fragments of one of the kneecap sections has been restored, showing it to have been of rounded form. The remaining form - width of the calf section or narrowness and tapering of lower leg - cannot be made out because of the fragmentary state. The lower legs finished off in a wide-pointed tip at the centre, and the edges curve upward towards the back. The lateral edge of the above-mentioned kneecap fragment shows the lateral edge to have curved from knee to outer calf - however the degree of curvature cannot be made out.
Anatomical details: It is almost impossible to make out anatomical details on the severely corroded greaves, as only the slightest swellings and bulges of these remain.
Edges: All surviving edges are/were lined with an ornamental border consisting of two parallel chased lines - one just at the edge, the other a few millimeters above. The metal along the border is also thicker than that of the remaining greaves.
Reworking: The above-mentioned ornamental borders along the upper half of the leg are embellished with a series of uniform, small perforations punched from the inside. Two large perforations also mark the lower corners of one of the greaves.
Note also the missing kneecap sections, which may also be the result of reworking. Some of the additional fragments may also belong to the kneecap sections, but these are too

corroded and few to be clearly considered as such.

Summary: The reworking of these greaves follows the pattern of reworked greaves found in the Western Caucasus.The most noteworthy details of this greave pair, aside from the heavily damaged state, are the shape of the lower edges with their wide, pointed tips, the ornamental border and the addition of perforations to the borders in only the upper half of the greaves.

Location details: State Hermitage Museum. Inv. no. Ku 1915.

Literature: No literature available.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kur/G-04



A. Kur/G-04, kneecap, border detail.
(Photograph: S. Chandrasekaran)

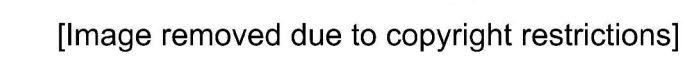
Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Measurements: H = 9.3.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-03, Kur/G-08, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: Damage to part of the upper edge/corner.
Traces of oxidation.
Description: Kneecap section from a greave.
Form: There is no indication of the lateral edge and, subsequently, its degree of curvature towards the outer calf.
Anatomical details: The upper kneecap juts forward directly from the greave edge to form a short upper profile. The surface is smooth with no indication of vastus muscles.
Edges: The edge is lined with an ornamental border consisting of parallel, incised lines. Note the damaged perforation at the top of the kneecap, indicating that the greave was intended to be hung.

Comparisons: Note the extreme similarity in form to the kneecap from May/G-01 and kneecap fragment Kur/G-05.
Location details: State Hermitage, Inv. no. Ku 2495/46.
Literature: Galanina 1980, 100, no. 75.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kur/G-05



A. Kur/G-05, kneecap, ornamental border detail.
(Photographs: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-08, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: The fragment is only one of many found in section 2495 of the Kurdzhips complex. Only the upper kneecap is preserved.
Description: Fragment of a greave kneecap section.
Form: The rounded upper kneecap section of a full-length greave. There is no indication of the lateral edge and, subsequently, its degree of curvature towards the outer calf.
Anatomical details: The triangular knee is given as a jutting protrusion with smoothened contours. Only the upper half of the knee remains. Note that the vastus muscles are not moulded into the greave.
Edges: The upper edge is lined with a simple ornamental border consisting of two parallel chased lines. Note that there are no perforations lining the border.
Summary: The distinguishing feature of this fragment is the jutting knee and the lack of the vastus details above the kneecap.

Comparisons: This kneecap fragment is similar to the fragment Kur/G-04 and the kneecap of May/G-01.
Location details: State Hermitage, Inv. no. Ku 2495/44.
Literature: Galanina 1980, 100, no. 76.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kur/G-06



A. Kur/G-06, detail of vastus muscle and outer kneecap edge.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Measurements: L = , W = .ca. 6x6
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-08, Kur/G-07, Kur/G-01).
Preservation: Only one side of the upper kneecap section is preserved, including a vastus bulge.
The golden-coloured patina is clearly visible.
Description: Upper part of a kneecap section.
Form: Kneecap fragment - upper part of the kneepart section.
Anatomical details: A portion of a small yet pronounced swell of one of the vastus muscles is clearly discernible - most likely the shorter, outer vastus, judging by its placement close to the greave's upper edge. Below it is part of the elongated swell of the upper kneecap.
Edges: The edge is clean and displays no ornamental border.
Reworking: A large, round perforation cleanly punched from the inside marks the centre of the kneecap edge. Half of another, similarly large yet rougher perforation remains along the damaged left edge, marking the corner of the kneecap swell. While the clean-punched perforation may be part of the original manufacture, the second one is clearly a secondary addition to this greave.

Summary: The defining features of this kneecap fragment are the clean edge without any ornamental border and the secondary addition of large perforation(s).
Location details: State Hermitage, Inv. no. 2495.
Literature: No literature available.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kur/G-07

[Image removed due to copyright restrictions]

A. Kur/G-07, fragment of kneecap.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Single/Pair: fragment(s)
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-08, Kur/G-01).
Preservation: The fragment is torn on all sides except one, which preserves the original edge with ornamental border.
Traces of the original golden colour of the metal preserved.
Description: Part of the outer section of a torn kneecap section.
A section of the S-shaped curve of the lateral edge between knee and outer calf.
The fragment was evidently torn from a greave, the lower torn edge then set with secondary perforations, the upper corner (an outer corner of the original kneecap section) punched with a clean perforation from the inside.
The surviving original edge is lined with an ornamental border consisting of two parallel chased lines. There were no perforations originally lining this greave.
Location details: State Hermitage, Inv. no. 2495/46.
Literature: Galanina 1980, 101, no. 78.

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kur/G-08

[Image removed due to copyright restrictions]

A. Kur/G-08, fragment from kneecap.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Single/Pair: fragment(s)
Measurements: L = 10.2, W = 5.8; Perforations - diameter = 0.3.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, three Chalcidian helmets (Kur/H-01, Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: This fragment is damaged on one side, leaving a little more than half of the full kneecap section. The surface suffered heavy corrosion and serious oxidation. While most of this has been cleaned, only minute traces of the golden-coloured patina could be restored.
Description: Kneecap section of a greave - partially damaged.
Form: Rounded half of a kneecap section, with corner of the upper edge and one side surviving. There is no indication of the form of the lateral edges towards the outer calf.
Anatomical details: The once sharply jutting kneecap has been flattened, but the upper contours remain visible. Above the knee, just below the upper greave edge, is the damaged swell of a vastus muscle. Its positioning just below the edge suggests it to be the short, outer vastus.
Edge: Only one rounded edge has survived. It is clean-cut, yet has no ornamental border.
Reworking: A pair of large, uniformly round perforations are set along the surviving lateral edge, just outside the upper knee. Note also the damaged, equally large perforation along the same edge at the bottom of the fragment. All perforations were punched from the inside and suggest the attachment of bindings or an inner lining.

Summary: This knee fragment is distinguished by its anatomical details - jutting kneecap and vastus swell, - lack of ornamental border and secondary addition of perforations along the edge.

Location details: State Hermitage, Inv. no. 2495.
Literature: Galanina 1980, 101, no. 77.

[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kur/H-01

[Image removed due to copyright restrictions]

A. Kur/H-01, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

B. Kur/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type V
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated in 1896 following the appearance of numerous chance finds in 1895, to which the helmet belongs. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze
Measurements: H =18.3; L = 22; W = 16.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, two other Chalcidian helmets (Kur/H-02, Kur/H-03) and Greek-style greaves (Kur/G-08, Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: Found in a fragmented state.
Forehead, upper and rear sections of the dome damaged/split open. Most of the neck guard missing with the exception of the leftmost section. The lower neck guard brim torn off and preserved separately. Plenty of dents and scratches.
Both hinge components and cheekpieces missing.
Signs of oxidation and heavy corrosion, which has been cleaned to reveal some of the original bronze patina. The helmet has undergone full conservation, but has yet to be restored.
Description: The helmet form consists of an semicircular/egg-shaped dome set atop a lower body of smaller diameter, from which it is distinctly offset.
The helmet dome is of an uneven ellipsoidal shape (egg-shaped) at the base, with the wider side marking the face. The sides narrow as they rise, resulting in a softly rounded upper edge running from front to back of the dome. Thus the helmet dome appears to peak from the front, yet remains semicircular in profile.
The forehead section of the dome is offset to form a elegantly curved, high gable. The gable form is exactly the same as that of the helmets from Temnolesskaya (Tem/H-01) and Tulskaya (Tu/H-01).
In spite of the inward deformation (due to external pressure), it is clear that the long helmet body fall vertically except the back, which falls with an outward slant.
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are wide and relatively shallow. They are framed by a wide ornamental border which is only minutely offset from the helmet body.
The ornamental border peaks above the eyes and narrows ever so slightly towards the inner and outer edges The border turns downwards at the nose bridge, where it narrows severely to follow the edges of the nose guard.

Note: the eye borders are pressed inwards, resulting in a slight inward slant, thus reducing the optical illusion of large eyes created by the cutouts themselves.
The relatively short and fully intact nose guard is of an elongated diamond shape with a pointed tip.
The rounded ear cutouts are rather short and cut to a slightly elongated half-circle. They are marked only by a slight flare of the edges.
The preserved left side of the neck guard shows it to be fairly long and falling with an outward angle. It finishes off by flaring into a short, rounded brim. The main/right section of the brim survives as a separate fragment. The left side is marked by a short, rounded lappets which droops below the brim and hangs slightly forward.
No part of the hinge components has survived, as the helmet sides were cut in an extremely clean (and perhaps even finished!), straight line just below the rivet holes - four on each side.
There is nothing to indicate the hinge tooth ratio or the shape of the cheekpieces.

Comparisons: The helmet finds its closest parallels in those fromTemnolesskaya (and thus Kochi) and Tulskaya.There is practically no discrepancy amongst these three helmets, suggesting their manufacture in the same workshop and/or using the same form.[2]
Location details: State Hermitage Museum. Inv. no. 2495/42.
Literature: Chernenko 2006, no. 566-568; Galanina 1980; Ditler 1964, 315-320; Rabinovich 1941, 144-145, Pl. XVI; OAK 1898 (for 1896), 61, Fig. 293.

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* I would like to thank Dr. Yuri Alekseev and Tatyana Ryabkova at the State Hermitage for granting me generous access to the Kurdzhips material.
[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.
[2] Galanina, like Rabinovich (1941, 144) draw a direct comparison to the helmet from Kekuvatsky (Kek/H-01) and date the Kurdzhips helmets based on this. However, there are many discrepancies between these two helmets (see catalogue entry Kek/H-01).

Kur/H-02

[Image removed due to copyright restrictions]

A. Kur/H-02, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

B. Kur/H-02, three-quarters-view from the rear.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type V
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896 following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Measurements: H = 24; W = 20.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, two other Chalcidian helmets (Kur/H-01, Kur/H-03) and Greek-style greaves (Kur/G-08, Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: In extremely poor shape. Only part of the right side survives, together with a small section of the forehead and all of the neck guard.
Both cheekpieces and all traces of the hinge components are lost.
What is preserved has been restored from a number of fragments. At least three further fragments remain which could not be fitted into the restoration.
The conserved surface shows signs of heavy denting, as well as some oxidation and corrosion that has been cleaned.
Description: The helmet consists of a rounded dome set atop a helmet body of smaller diameter. The distinct offsetting of dome from helmet body is clearly visible in the rear, the only section where it survives.
Only the rear and right side of the dome survive. The original semicircular/ellipsoidal shape has been pressed/dented outward from within, pushing the rounded walls outward.
The right forehead section is torn away just above where the gable would have been. None of the left section survives.
Of the helmet body, only the neck guard section and a very small portion of the right side survives. The back (neck guard) is curved.
The sides of the helmet rim are marked by arched cutouts for the ears.
The rounded ear cutouts are rather short and cut to a slightly elongated half-circle. They are marked only by a slight flare of the edges.
The neck guard falls in an elegant, symmetrical curve into a slightly flared and rounded lower rim. The right side is marked by a long, rounded lappet which droops below the brim and hangs slightly forward. The left lappet has broken off.
No part of the hinge components has survived, as the helmet sides are damaged above where the rivet holes could be expected. Therefore, there is nothing to indicate the hinge tooth ratio.

The cheekpieces are also not preserved.

Comparisons: The only decently preserved section, the neck guard, is reminiscent of that of the Kekuvatsky helmet (Ke/H-01).[2]
Location details: State Hermitage Museum. Inv. no. 2495_43.
Literature: Chernenko 2006, no. 566-568; Galanina 1980; Ditler 1964, 315-320; Rabinovich 1941, 144, Pl. XVII; OAK 1898 (for 1896).

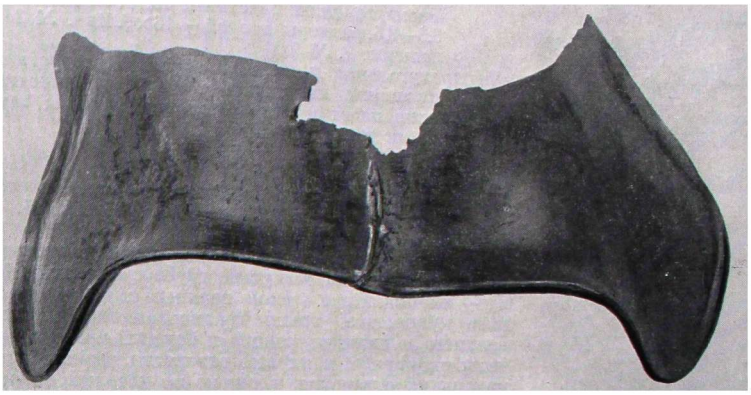
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* I would like to thank Dr. Yuri Alekseev and Tatyana Ryabkova at the State Hermitage for granting me generous access to the Kurdzhips material.
[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.
[2] Galanina, like Rabinovich (1941, 144) draw a direct comparison between Kur/H-01 and the helmet from Kekuvatsky (Kek/H-01) and date all the Kurdzhips helmets based on this. I would like to note that only this particular helmet bears a direct resemblance in the neck guard. As for the remaining form, nothing remains with which to draw comparisons.

Kur/H-03

[Image removed due to copyright restrictions]

A. Kur/H-03, two neckguard fragments.
(Photograph: S. Chandrasekaran)



B. Kur/H-03, both fragments combined.
(After Galanina 1980, 99, Fig. 68)

Helmet type: Chalcidian type V
Find site: Kurdzhips
Find context: Part of the 'main' burial of the great Kurdzhips kurgan, situated in the foothills surrounding the town of Kurdzhips (ca. 22 km south of Maykop). The kurgan was excavated officially in 1896, following the appearance of numerous chance finds and work by locals in 1895. The complex contained the burials of at least four persons. The finds included golden jewellery and clothing applications as well as a wealth of weaponry (in fragments).
Dating: The kurgan assemblage is dated to the end of the 4th century BC.
Material: Bronze.
Measurements: H = 9; W = 18.9.
Other weapon finds: Offensive weapon finds of iron included six swords, a dagger, at least nine spearheads and 166 arrowheads.[1] Defensive weaponry included cuirass and shield fragments, two other Chalcidian helmets (Kur/H-02, Kur/H-01) and Greek-style greaves (Kur/G-08, Kur/G-02, Kur/G-03, Kur/G-04, Kur/G-05, Kur/G-06, Kur/G-07, Kur/G-01).
Preservation: Only the neck guard has survived partially, in two fragments. The neck guard was clearly cut away roughly from the remaining helmet.
Description: The neck guard is formed in an elegant, symmetrical curve with a slightly flared and lower brim that is rounded. It is not clear just how long the neck guard was or at which angle it fell from the helmet dome, as it has been torn somewhere below the base of the dome.
The sides are marked by rounded lappets which droop below the brim and would have hung forward.

The neck guard form seems identical to that of Kur/H-01 and Kur/H-02.
Location details: State Hermitage Museum. Inv. no. 2495_44.
Literature: Chernenko 2006, no. 566-568; Galanina 1980; Ditler 1964, 315-320; Rabinovich 1941, 144, Pl. XVII; OAK 1898 (for 1896).

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[1] Other finds include a multitude of high-quality pottery, jewelry and precious metal vessels. See Galanina 1980 for a complete list of finds.

Kut/H-01

[Image removed due to copyright restrictions]

Kut/H-01, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

B. Kut/H-01, left profile, detail of right side.
(Photograph: S. Chandrasekaran)

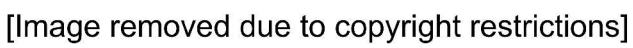
Helmet type: Chalcidian type V
Find site: Kutaisi
Find context: Found by chance in the Rioni River valley near the town of Kutaisi, Georgia.
Dating: Unknown.
Material: Bronze.
Measurements: H = 23, W = 16, L = 23.
Preservation: Found in very good condition. Some damage to the helmet dome at the forehead and the rear. The hinge components and cheekpieces missing.
The shiny patina well-preserved. Ancient damage and repair attempts visible.
Description: The helmet consists of a rounded dome with peaking crest set atop a lower section of smaller diameter, from which it is distinctly offset.
Note that the offsetting is especially pronounced in the back.
The helmet dome is egg-shaped at the base, wider in the face and narrow at the back. The sides narrow as they rise, resulting in a softly rounded upper edge running from front to back of the dome. Thus the helmet dome appears to peak from the front, yet remains semicircular in profile.
The forehead section of the dome is clearly offset to form a wide, elegantly curved, high gable. The gable form is quite similar to that of the Temnolesskaya helmet (Tem/H-01).
All sides of the helmet body fall vertically except the back, which falls with a slight outward slant, also reminiscent of the helmet Tem/H-01.
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are wide, not particularly high, and almond-shaped, precisely the same as the Temnolesskaya helmet. They join in the centre to form an elongated nose guard. They are framed by a somewhat wide ornamental border which is distinguished from the helmet body by a deep furrow.
The ornamental borders peak above the inner eyes and narrow towards the inner and outer edges. The same border continues to the nose guard, thinning out to a slightly offset line just below the nose bridge.
The nose guard is thin and elongated, with a rounded tip.
The ear cutouts are wide, roughly rounded, and marked only by a slight flare of the edges.
The neck guard is fairly long. It falls in a straight line with slight outward slant, finishing with a short, horizontal flare of the. The sides of the neck guard droop forward and below the level of the neck guard rim to form short, rounded lappets.
Of the upper hinge components, only some of the original rivet perforations survive, without any trace of the inner flaps or hinge teeth. The lower helmet sides were deliberately removed/cut away just below these - the right edge in a more-or-less evenly horizontal line, the left edge unevenly.
Reworking includes the addition of uniformly sized perforations between and slightly above the original ones. The result is a line of 9-10 'staggered' perforations.
Note the perforation punch *mark* (no hole punctured) in the middle of the line of holes on

the right helmet side (see inlay, Fig. B).
There is not enough evidence to indicate the hinge tooth ratio or cheekpiece shape.

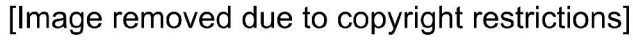
The overall form of the helmet and the execution of many details - offsetting, eye cutouts, neck guard - as well as the levelled-off sides of the helmet are especially reminiscent of the helmet from Temnolesskaya (Tem/H-01).

Location details: State Historical Museum. Inv. no. GIM 61071.
Literature: Chernenko 2006, № 579; Zhuravlev/Lomtadze 2002, no. 304; Rabinovich 1941, 145, Pl. XIX; also Museum (GIM) inv. records B - 1418, no.1.

Lan/H-01



A. Lan/H-01, front.
(Photograph courtesy of D. Kacharava)



B. Lan/H-01, three-quarters-view from right.
(Photograph courtesy of D. Kacharava)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: Lanchkhuti
Find context: Apparently from a 4th century BC complex in Lanchkhuti.

Dating: 4th century BC, based on the dating of the complex.
Material: Bronze.
Measurements: (approximate): preserved H = 21.5; W=18.5cm;
Preservation: Upper section of helmet damaged/missing, as are both cheekpieces. Further damage includes signs of wear and tear on the helmet dome (e.g. hole in the dome just above the gable). The metal surface still shows signs of previous corrosion and oxidation. The helmet has been conserved and part of the original bronze-coloured patina is visible.
Description: The helmet consists of a semicircular bowl which narrows distinctly towards the top. This is set atop and heavily offset from the long lower helmet body.
The offset dome forms a short, curved gable at the brow.
The front is marked by pronouncedly large, high-rounded arched cutouts for the eyes, as well as a wide, elongated nose guard.
The eye cutouts are accented by a wide, heavily offset edge. This ornamental edge peaks in width at the top of the arched eyes and narrows towards the edges of the eyes. It thins significantly at the nose bridge and borders the remaining nose guard as a thin line of piping.
The sides of the helmet are marked with high, well-rounded ear-cutouts that flare slightly at the edges.
The neck guard appears to fall vertically, with a slight outward slant, apparently finishing with a steep outward flare at the rim. The sides do not droop to form lappets.
Three of the upper hinge teeth have survived, and the relevant hinge pins - only partially damaged - are still in place. The upper hinge flaps were clearly not riveted.
The hinge tooth ratio was 3:2.

This helmet is comparable with other helmets of the 'Sochi' type, in particular with those of the Sochi workshop.

Location details: Lanchkhuti Museum.
Literature: Gamkrelidze 2008, 147, Pl. III,3.

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* As I was unable to view this helmet myself, I would like to thank Dr. Darejan Kacharava for providing me with photographs of this helmet showing them from the front. Unfortunately, no pictures showing the helmet in profiles could be procured.

May/G-01

[Image removed due to copyright restrictions]

A. Mai/G-01, left greave, inner profile - front - outer profile - rear.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Maykop
Find context: Purchased in Maykop in 1906.[1]
Dating: Unknown.
Material: Bronze.
Single/Pair: left greave
Measurements: must be measured
Preservation: Good condition. Restored almost completely from a number of large fragments. Damage includes a missing lower edge and part of the inner calf section. The greave suffered relatively little damage from oxidation and corrosion, and much of the original golden-coloured patina survives.
Description: Left greave only.
Form: A slender, full-length greave for the left leg. The form consists of a rounded kneecap section, slightly wider calf section and slightly tapering lower leg. It is unclear whether the lower leg finishes with an outward flare. The lateral edges between upper knee and calf form an S-shaped curve.
Anatomical details: The kneecap and upper tibia are given as one smooth, simple, well-rounded form with sharp upper profile jutting forward from the greave edge. The vastus muscles are not shown. The calf muscles are soft, extremely reduced protrusions contained mainly to the back of the greave (resulting in the greave's extremely slender appearance from the front). Anterior and peroneus are given as two very slightly moulded protrusions which run parallel and almost vertically all the way to the bottom edge of the greave. The soleus is similarly given on the inner side. The shinbone is only suggested by the rounded central crease of the greave.
Edges: All surviving edges are lined with an ornamental border consisting of a single and double-incised lines.
Reworking: Examples of reworking include two pairs of large perforations punched from the outside along the outer lateral edge between knee and upper calf, and a similar large perforation at the corner edge of the inner upper calf. Note that there are no matching perforation pairs on the inner lateral edge, nor a trace of counterpart corner perforation.
Summary: This greave is characterised by its very slender form and extremely reduced anatomical features, in particular the lack of vastus muscles or a separate moulding for the upper tibia. Note also the smooth, sharply jutting form of the upper kneecap from the greave edge.

Comparisons: The sharply jutting form of the kneecap section is comparable to that of the kneecap fragments Kur/G-04 and Kur/G-05. The overall slender greave form and containment of the calf muscles to the rear is reminiscent of the greave from Kul-Oba KO/G-01. Compare also with the greave pair from Ilintsy.[2]
Location details: State Hermitage Museum, St. Petersburg. Inv. no. 2509-29.

Literature: Chernenko 2006, no. 688; Galanina 1965, no. 28, Figs. 3.3, 3.4; OAK 1909 (for 1906), 128.

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[1] The Hermitage Museum records clearly identify this greave's provenance. However, Chernenko erroneously refers to this greave as a purchase from Anapa, while Galanina simply records it as a purchase of 1906 from the Kuban region. I would like to thank D. Aleksinsky for pointing out the erroneous reference.

[2] Galanina 1977, 35, Fig. 16.3; Chernenko 2006, no. 639.

May/H-01



A. May/H-01, three-quarters-view from left.
(After Cat. Petersburg 2007, Fig. no 62)



B. May/H-01, right profile.
(After Rabinovich 1941, Pl. 20.2)

Helmet type: Chalcidian type 'Sochi'
Find site: Maykop
Find context: Purchased in Maykop in 1906.[1]
Dating: Unknown.
Material: Bronze. The surface was polished to a silver colour.[2]
Measurements: H = 21; L = 22.5; W = 18.
Weight: 850
Preservation: The helmet was found in good shape. The dome was almost fully intact, showing signs of minor denting only. The neck guard was damaged. The cheekpieces have not survived.
The nose guard was originally broken at the tip but has now been restored.
Rabinovich reports traces of black in the punched ornament. These are no longer visible.
The helmet surface retained much of its original silvery patina and signs of minor corrosion only.
Description: The helmet consists of an egg-shaped dome with pronounced tip set upon a long helmet body of a somewhat smaller diameter, from which it is separated by two heavily offset parallel ridges. The base of the dome is ellipsoidal. The dome itself narrows as it rises towards the top, resulting in a well-pronounced, sharp upper edge running from the gable tip in the front to the back.
The offsetting of the forehead section forms a short and narrow 'double-gable' with squared corners.
The helmet body is long, its sides fall vertically and slightly outward.
The front and sides of the helmet rim are marked by cutouts for both the eyes and ears.
The eye openings consist of wide, shallow arches. The ear openings, on the other hand, consist of wide semicircular rounds with slightly flaring edges.
The eye openings are framed by a wide, offset edge, which narrows towards the eye corners. Noteworthy is the ornamentation of the offset edge: a line of small punched circles - the centres marked with a punched dot - connected by diagonal punched lines, together forming a 'wave' ornament. Note the similarity to the punched ornamental circles on the Sochi helmet Soc/H-06. The ornament runs all the way down to the tip of the nose guard. The ornamented edges turn down at the inner corners of the eye to disappear into the middle of the nose guard.
The nose guard is somewhat long, with a rounded, narrowing tip.
Note the ornament lining the side rim of the helmet between eye and ear openings. This consists of a series of three parallel 'waves' as described above at the eyes.
The neck guard, like the remaining helmet body, is long and vertical, with a slight outward slant. No photographs were available of the neck guard proper, so it is impossible to conclude its full shape at this time. Rabinovich does note a chased 'double-wave' ornament at the nape.
The upper hinge components are partially intact. Just how much of the inner flap survives

remains unclear. Three of the four 'teeth' for the hinge pin survive on each side. Note that the hinge teeth of the left side have been forced open. Neither of the hinge pins survive, nor is any trace of the riveting of the upper component visible.
The ratio of upper to lower hinge 'teeth' is 4:3.
The upper hinge teeth were prised open and the cheekpieces removed.

This helmet is similar in its overall form to Soc/H-01, yet even more so in its ornamentation to Soc/H-06, thus indicating a common workshop and a findspot in the Sochi/Kuban area.

Location details: State Hermitage Museum. Inv. no. 2507/1.
Literature: Galanina 2007, no. 62; Chernenko 2006, no. 574; Rabinovich 1941, 147, Pl. 20.

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* I would like to thank Dmitry Aleksinsky of the State Hermitage for finding time to discuss this helmet, which was not available for study at the time of my visit.
[1] Galanina (2007) notes that both Chernenko and Rabinovich erroneously refer to this helmet as a purchase from Anapa. I would like to thank D. Aleksinsky for this information.
[2] Rabinovich describes it erroneously as 'silver-coated'.

May/H-02 [Images reproduced with permission of the National Museum of Adygea]

Catalogue of the Museum Fund of the Russian Federation - https://goskatalog.ru/portal/#/collections?id=24237184



A. May/H-02 - front.
(Photograph: S. Chandrasekaran)



B. May/H-02 - right profile.
(Photograph: S. Chandrasekaran)

Helmet type: Attic type with visor, simplified
Find site: Maykop
Find context: From the Apostolidi tumulus in Adygeya, uncovered in 1988. No further find context available.
Dating: Unknown. Probably 4th century BC.
Material: Bronze.
Preservation: In very good shape. Damage includes a large hole in the visor, some corrosion of the 'pediment', a large tear along the top. A part of the rear section with neck guard is also missing.
The cheekpieces and part of the hinge components have not survived.
Traces of the original golden-coloured patina survive.
Description: The helmet form consists of a rounded body marked with a large rounded visor in front and a distinct wide crest at the top. The rear of the helmet forms a short neck guard with slightly drooping, short lappets.
The helmet body and visor are separated by the pediment-like partition typical of this helmet type. The pediment consists of two hammered ridges, both moderately offset - the upper one resembling a shallow arch, the lower one horizontal. These join at the helmet sides to form a spiralling volute on each.
The helmet crest is wide and hollow.
The visor is wide, with a pronounced, rounded outer edge.
The outer edge of the neck guard forms a squared arch.
The upper hinge teeth survive partially on the inside of the helmet, as do three rivet perforations.
The hinge tooth ratio is 3:2.

Comparisons: The helmet form is very similar to that of the helmet Ker/H-01. The moderate offsetting of the forehead ridges and the form of the spiralling volutes is similar to what we see on other helmet finds of the 'simplified' Attic-with-visor type.
Location details: National Museum of Adygea, Maykop. Inv. no.
Literature: Simonenko 1999, 134, Fig. 108.3; Maslennikov/Treister 1998, 9;

Mer/H-01



A. Mer/H-01, three-quarters-view from right.
(Photograph courtesy of D. Aleksinsky)

Helmet type: Pilos
Find site: Merdzhany
Find context: From illicit excavations of a kurgan burial near the village of Merdzhany (near Anapa). Found in 1876, presented to the State Hermitage in 1877. The burial contained a gold-silver rhyton, plenty of gold and amber jewelry and two pilos helmets. There is no mention of other weapon finds.
Dating: The burial is dated by its assemblage to the 2nd half of the 3rd century BC.
Material: Bronze. Note that the metal composition of both Merdzhany helmets is practically identical to that of the helmet from Akhtanizovskaya (Akh/H-01).[1]
Measurements: wall thickness: ca. 0.1; volutes: 40x32;
Other weapon finds: Pilos helmet Mer/H-02.
Preservation: Only the main conical helmet body is partially preserved. The lower rear and parts of the sides are partially damaged. The lower rim is torn on all sides, damaging part of the forehead ornament.
The forehead visor and the neck guard have not survived, nor has any trace of both hinge components or the cheekpieces.
Description: The helmet form consists of a concical body with gently pointed, high crown. The forehead is marked by a high, curved gable formed as a distinctly offset ridge. The upper section of the gable is more heavily offset than the lower. The sides are marked by the remainder of this ornament as it curves into a thick, disc-shaped volute.
Nothing can be said about the hinge components or the hinge-tooth ratio.

Comparisons: This helmet is identical in form and metal composition to the other helmet from Merdzhany (Mer/H-02) as well as practically so to the helmet from Akhtanizovskaya (Akh/H-01) - note the identical metal composition. All three are probably of the same manufacture. The similarity in form also holds for the helmet Ge/H-01 (of which the metal composition has yet to be determined).
Location details: State Hermitage Museum, St. Petersburg. Inv. no. 2521/1
Literature: Aleksinsky 2008; Aleksinsky 2005?; Rabinovich 1941, 162; IAK 49, 133; Rostovtsev in IAK 49, 133.

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[1] Aleksinsky (2008, 24, FN 19).

Mer/H-02

[Image removed due to copyright restrictions]

A. Mer/H-02, front and right profile.
(Photographs courtesy of D. Aleksinsky)

Helmet type: Pilos
Find site: Merdzhany
Find context: From illicit excavations of a kurgan burial near the village of Merdzhany (near Anapa). Found in 1876, presented to the State Hermitage in 1877. The burial contained a gold-silver rhyton, plenty of gold and amber jewelry and two pilos helmets. There is no mention of other weapon finds.
Dating: The burial is dated by its assemblage to the 2nd half of the 3rd century BC.
Material: Bronze. Note that the metal composition of both Merdzhany helmets is practically identical to that of the helmet from Akhtanizovskaya (Akh/H-01).[1]
Measurements: wall thickness: ca. 0.1; volutes: 40x32;
Other weapon finds: Pilos helmet Mer/H-01.
Preservation: Not as well-preserved as Mer/H-01. The helmet is damaged along the base and at the tip. The forehead section is only partially preserved, much of the rear is missing. No portion of the neck guard, hinge components or forehead visor has survived.
Description: The helmet form consists of a concical body with gently pointed, high crown. The forehead is marked by a high, curved gable formed as a distinctly offset ridge. The upper section of the gable is more heavily offset than the lower. Part of the curved ornament is visible at the sides, but the volutes have been damaged.
Nothing can be said about the hinge components or the hinge-tooth ratio.

Comparisons: This helmet is identical in form and metal composition to the other helmet from Merdzhany (Mer/H-01) as well as practically so to the helmet from Akhtanizovskaya (Akh/H-01) - note the identical metal composition. All three are probably of the same manufacture. The similarity in form also holds for the helmet Ge/H-01 (of which the metal composition has yet to be determined).
Location details: State Hermitage Museum, St. Petersburg. Inv. no. 2522/2.
Literature: Aleksinsky 2008; Aleksinsky 2005; Rabinovich 1941, 162; IAK 49, 133;

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[1] Aleksinsky (2008, 24, FN 19).

Mez/H-01

[Image removed due to copyright restrictions]

A. Mez/H-01, front.
(Photograph courtesy of E. Khachaturova)

Helmet type: Local variation on Chalcidian style
Find site: Mezmay
Find context: From the looted Mezmay I flat-grave cemetery - found in the excavated dirt during the official 2004 campaign. Found together with other helmets.
Dating: Probably 3rd-2nd centuries BC, based on the dating of the Mezmay burial no.3.
Material: Bronze.
Measurements: H = 17, W = 17.5, L = 21.6.
Other weapon finds: Helmet Mez/H-02 and fragments of further helmets.
Preservation: Originally preserved as a collection of fragments, this helmet has now been reconstructed. Both hinge components and cheekpieces survive.
Description: The helmet form consists of a semicircular upper dome and lower brow section, both of the same volume/diameter. Together they form a nicely rounded inverted bowl, but are separated from one another at the forehead by a moulded double-ridge running along the entire circumference.
The bowl-shaped dome is relatively short. It is characterised by a moulded ornament of long triple-lines radiating from a central set of triple-lines at the seam.
The tip of the helmet is marked by a hole with traces of rust, indicating some kind of iron attachment.
The helmet body is relatively short. All sides except the back fall vertically. It is characterised by cutouts for the eyes and a moulded zig-zag ornament running along its circumference just below the horizontal ornament of the helmet dome. The execution of the ornament is somewhat uneven.
Note the horizontal helmet rim at the sides and lack of cutouts for the ears.
The eye cutouts form shallow arches, very reminiscent of Kuban-style helmets. These meet in the middle to form a wide, triangular nose guard with pointed tip falling just below the nose bridge.
The neck guard falls with a slight outward curve, the slightly rounded rim is of a horizontal cut. The sides curve slightly forward towards the ears, but do not form lappets.
Note that all edges of the helmet rim, including at the eyes and nose guard, are marked by a thin ornamental border formed by folding the metal outward and hammering it flat.
The upper hinge component consists of two narrow, riveted teeth cut from a folded hinge flap.
The lower component consists of three hinge teeth marking the outer edges and the centre. Note the discrepancy in tooth size: the back tooth (i.e. closest to the neck) is extremely wide, the front one is less wide, and the middle one is extremely narrow. The three rivet holes - punched from the inside - are also intact.
The hinge pins appear to have survived in full.
The hinge tooth ratio is 2:3.
The thin, ornamented cheek flaps are long and wide, covering both the cheeks and ears. The outer edge is rounded, the inner edge marked with a rounded indentation at the top.

The cheekpiece ornament consists of offset ridges framing the edges, with a double-ridge running its length in the middle.
In addition to the rivet holes, a series of smaller perforations - punched from the inside - lines the cheekpiece edges, possibly indicating the use of an inner lining of softer material. A final, larger hole marks the pointed inner edge of each cheekpiece. This latter could have been used for fastening a chinstrap.

Comparisons: In terms of construction and overall form, this helmet is very similar to the helmets Mez/H-02 and Dkh/H-01 and was *probably* manufactured in the same workshop.

Location details: Krasnodar State Museum of History and Archeology. Inv. no: KM 11936/113.
Literature: Shevchenko, Zaitsev, Mordvintseva 2011.

Mez/H-02

[Image removed due to copyright restrictions]

A. Mez/H-02, front.
(Photograph courtesy of E. Khachaturova)

[Image removed due to copyright restrictions]

A. Mez/H-02, right profile.
(Photograph courtesy of E. Khachaturova)

Helmet type: Local variation on Chalcidian style
Find site: Mezmay
Find context: From a looted burial of the Mezmay I flat-grave cemetery - found in the excavated dirt during the official 2004 campaign. Found together with other helmet remains.
Dating: Probably 3rd-2nd centuries BC, based on the dating of the Mezmay burial no.3.
Material: Bronze.
Measurements: H = 17, W = 16.7, L = 19.9.
Other weapon finds: Helmet Mez/H-01 and fragments from at least two other helmets.
Preservation: Discovered in a heavily fragmented and oxidised state. The original nose guard did not survive, but has now been reconstructed.
Both hinge components and cheekpieces survive.
Description: The helmet is shaped as a perfectly rounded inverted bowl. There are no protruding sections in the front or back. The helmet rim has a slight flare.
The only distinction between upper dome and lower body is the stamped, horizontal double-ridge ornament marking the transition to the neck.
The helmet crest is marked by an offset double-ridge running from the horizontal double-ridge at the neck to the forehead. The space between the ridges is lined with a row of rivets.
The front rim is marked with shallow, almond-shaped eye cutouts. These join in the middle to form an extremely short, pointed nose guard that reaches only to the nose bridge.
The cutout edges are framed by a slightly thickened offset border.
The helmet is characterised by a stamped ornament of a pair of large, winding ram's horns growing out of the upper brow on either side of the central seam and curling along the sides. The horns themselves are marked by a continuous line of perpendicular stamped ridges.
The upper hinge component consists of a folded, double-riveted flap or hinge tooth.
The lower component consists of two wide, looped 'teeth' marking the outer edges.Only one of the lower rivet holes is visible on the right cheekpiece.
The original hinge pins do not appear to have survived.
The hinge tooth ratio is 1:2.
The thin, ornamented cheek flaps are of a stylised sickle-form. They both long and wide, covering cheeks *and* ears. The upper, inner edge is formed as a double-wave line.
The cheek flap edges are lined with a stamped, double-ridge ornament running along all but the upper edge. Between this and the outer edge runs a series of smaller perforations - punched from the outside, perhaps indicative of an inner lining of softer material.

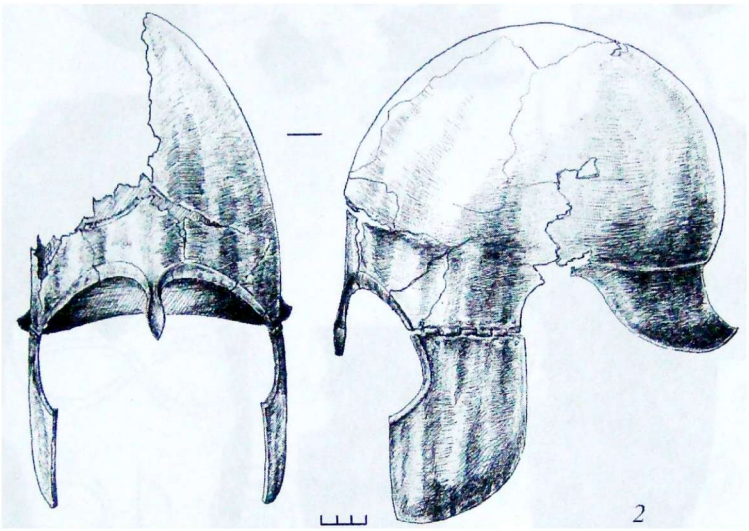
Comparisons: With the exception of the neck guard, the helmet form is rather similar to Mez/H-01. In terms of both form and ornamentation, it is almost practically identical to the helmet from Dakhovskaya Dkh/H-01.

Location details: Krasnodar State Museum of History and Archeology. Inv. no: KM 11936/112.
Literature: Shevchenko, Zaitsev, Mordvintseva 2011.

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* I would like to thank Dr. Evangelina Khachaturova, Keeper of Antiquities at the Krasnodar State Museum, for showing me the fully restored helmet, and Mikhail Shmaglyuk for providing me with the necessary photographs and explaining the restoration process.

Mez/H-03



A. Mez/H-03, front and left profile.
(After Shevchenko, Zaitsev, Mordvintseva 2011, Fig. 6.2)

[Image removed due to copyright restrictions]

B. Mez/H-03, before reconstruction.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type V
Find site: Mezmay
Find context: From an undisturbed burial - no. 3, the 'warrior' burial - of the Mezmay I flat-grave cemetery, excavated during the official campaign of 2004. Other finds included golden jewellery, large ceramic and metal vessels and numerous weapons
Dating: The burial assemblage is dated to the 3rd-2nd centuries BC.
Material: Bronze.
Measurements: H =22, L= 26; cheekpieces: H = 16.5.
Other weapon finds: The Attic-with-visor helmet Mez/ H-05, three iron swords, an iron axe, two iron spearheads, a bone knife and an arrowhead.
Preservation: The helmet had been heavily damaged by stones and was thus seriously fragmented.
It has now undergone full cleaning and been (partially) reassembled from these fragments.
Description: The helmet form consists of an ellipsoidal dome set atop a lower body of smaller diameter, from which it is distinctly offset.
The helmet dome is ellipsoidal at the base. The sides narrow as they rise, resulting in a softly rounded upper edge marking the helmet crest, and a peaking appearance from the front.
The forehead section of the dome is offset to form a elegantly curved, high gable. The gable form is exactly the same as that of the helmet from Kekuvatsky (Ke/H-01).
The helmet body is vertical and of average length,
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are wide and rather shallow. The non-symmetrical arched shape peaks towards the inside and not at the centre.
The cutouts are framed by a rather wide border marked by a deep, incised line along the outer edge. Note: there is no offsetting of the border.
The borders narrow towards the inner and outer edges. They turn downwards at the nose bridge and form a thin frame along the edges of the nose guard.
Note: the eye borders have been pressed inwards, resulting in a slight inward/downward slant, thus reducing the optical illusion of large eyes created by the cutouts themselves.
The ear cutouts are wide and semicircular. They are marked only by a slight flare of the edges. Note that the rear edge does not fall vertically, but flows further back, seamlessly flowing into the neck guard.
The centre of the helmet face is marked by a short, diamond-shaped nose guard with flowing edges and a pointed tip.
The short neck guard carries a pronounced outward curve and slightly flared rim. The outer neck guard edge is rounded. There are no lateral lappets.
Both cheekpieces and all of the hinge component parts have survived.
The inner flaps are partially intact, together with a number of the looped hinge 'teeth' from both the upper and lower components, much of the riveting along both edges and the hinge

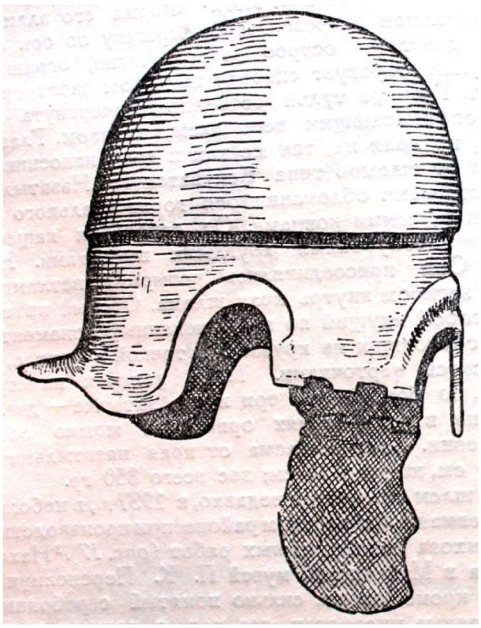
pins.
The hinge component is a 4:3 construction.
The cheekpiece is a long, with rounded end and forward curvature, similar to that of the Kekuvatsky helmet.

Comparisons: This helmet finds its closest parallel in the Kekuvatsky helmet (Ke/H-01). Note the exact similarity of the gable shape, incised lines around the eyes, and over shape of the elements.
Differences include the shape of the eye and ear cutouts as well as the neck guard.
Location details: Krasnodar State Museum of History and Archeology. Inv. no: KM 11936/73.
Literature: Shevchenko, Zaitsev, Mordvintseva 2011.

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* I am extremely grateful to Dr. Evangelina Khachaturova, Keeper of Antiquities at the Krasnodar State Museum, for kindly allowing me to examine and photograph the helmet fragments while they were being restored.

Mez/H-04



A. Mez/H-04, right profile.
(After Rabinovich 1941, Fig. 17)

Helmet type: Chalcidian type 'Sochi'
Find site: Mezmay
Find context: Discovered in 1937 in a small kurgan during agricultural work in that area. The helmet was then brought to the Maykop Museum.
Other finds from this complex included silver and ceramic vessels and remains of weapons. The burial itself is dated to the (Early?) Roman period based on the weapons and the vessel of Sarmatian type.
Dating: Probably early 1st century BC.
Material: Bronze.
Other weapon finds: Two Roman swords and a spearhead.
Preservation: The original state of preservation remains unclear, due to the lack of published information.
The right cheekpiece was missing.
The helmet is now lost.
Description: The helmet consists of a short, semicircular dome set upon a long helmet body of a somewhat smaller diameter, creating a small yet distinct offsetting of the dome.
The base of the dome is oval-shaped. The dome narrows as it rises towards the top, thus creating a weak edge that runs from front to back.
The forehead section is not visible - nothing can be said about the gabling.
The helmet body is long. The sides fall vertically. The verticality in the back gives the impression of continuation of the line of the dome.
The front and sides of the helmet rim are marked by high, extremely arched cutouts for the eyes and ears.
In both cases, the cutouts are framed with a wide, heavily offset edge (more distinct than that of the helmet dome). The edges around the eyes narrow towards the outer eye. It is unclear whether there is any narrowing towards the inner eye. The edges framing the ears retain their width throughout.
The centre of the face is marked by a long nose guard with rounded tip.
The neck guard, like the remaining helmet body, is long and vertical. Its distinct feature is the wide, horizontal rim that flares from its end. The neck guard sides are emphasized by short, rounded lappets which droop slightly lower than the nape.
Only the left cheekpiece survives. Most of the left hinge component is intact. Of the right upper component, only the three looped 'teeth' remain. The drawing shows no traces of riveting on upper or lower components, nor does the right hinge pin survive. The latter indicates the deliberate removal of the cheekpiece.
The hinge tooth ratio is 3:2.

Comparisons: Most of the features of this helmet are reminiscent of those found on 'standard' helmets of the Chalcidian type V, both in the Western Caucasus and elsewhere.
Location details: Maykop Museum (Rabinovich)? Krasnodar Museum (Chernenko)?

Literature: Chernenko 2006, no. 576; Rabinovich 1941, 147-148, Fig. 17.

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[1] Rabinovich erroneously describes the surface as 'silver-coated'.

Mez/H-05

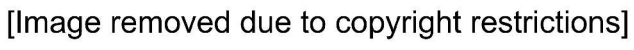
[Image removed due to copyright restrictions]

A. Helmet Mez/H-05 from the front / right profile before reconstruction.
(Courtesy of E. Khachaturova).

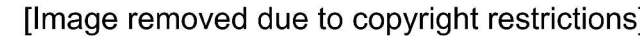
Helmet type: Attic type with visor, simplified
Find site: Mezmay
Find context: From an undisturbed burial - no. 3, the 'warrior' burial - of the Mezmay I flat-grave cemetery, excavated during the official campaign of 2004. Other finds included golden jewellery, large ceramic and metal vessels and numerous weapons
Dating: The burial assemblage is dated to the 3rd-2nd centuries BC.
Material: Bronze.
Other weapon finds: The Chalcidian type V helmet Mez/ H-03, three iron swords, an iron axe, two iron spearheads, a bone knife and an arrowhead.
Preservation: The upper portion of the helmet is severely damaged. Some minor damage to the forehead 'pediment' and visor edges.
The golden-coloured surface patina is well-preserved.
Description: The form consists of a rounded helmet dome slightly offset from its shorter lower section. The upper dome would have been smoothly rounded, *without* any ornamental crest.
The front is marked by an extremely reduced visor that does not protrude from the forehead. The back is formed to a short neck guard with distinct outer flare - reminiscent of Chalcidian type V neck guards and May/H-02 in particular - and with extremely reduced, rounded lateral lappets.
The forehead 'pediment' consists of moderately offset ridges, the upper forming a shallow triangular gable, the lower the slightly curved 'base'. Both ridges close the gap as they run to the helmet sides and finish in volutes of an offset disc shape.
The overall 'reduction' of certain features – visor protrusion and ornamental offsetting – combined with the 'bald' helmet dome and simplified rendition of the volutes as discs, is what characterises this particular helmet.

Comparisons: The general form of this helmet and its pediment-volute ornament is similar to what we find in other 'variations' of the Attic-with-visor helmet type from the Black Sea area.
Literature: Shevchenko/Zaytsev/Mordvintseva 2011, 122, 142-143, Fig. 6.1, 7.4; Simonenko 1999, 134-135;

NBS/H-01



A. NBS/H-01, front.
(Photograph: S. Chandrasekaran)



B. NBS/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: 'NORTHERN BLACK SEA AREA'
Geographic location: Not attested, most likely from the Sochi area (see below).
Find context: Unknown; part of the Karakovsky Collection which was donated to the Pushkin Museum by N. Vasiliyeva in 2005.
Dating: Unknown. Probably 4th century BC.
Material: Bronze. The special coating of the surface has partially survived: the bronze helmet surface was subject to a special thermal treatment, resulting in an extremely hard, silvery coating which was easily polished and resistant to dulling.
Preservation: Well preserved. The tip of the nose guard is damaged. The cheekpieces are missing.
The neck guard rim was found torn from the helmet body but has been reattached.
Description: The helmet consists of a short, semicircular dome set upon a long helmet body of a somewhat smaller diameter, creating a small yet distinct offseting of the dome.
The base of the dome is oval-shaped. The dome narrows steadily as it rises towards the top, resulting in a crease that marks the helmet crest as well as a peaking appearance when viewed from the front.
The helmet dome is heavily offset from the lower section at the forehead in the form of an extremely shallow pyramid - not a proper gable (similar to Soc/H-03).
The helmet body is long, Its sides fall with a slight outward bulge.
The front and sides of the helmet rim are marked by high, arched cutouts for the eyes and ears.
The cutouts here differ somewhat from all the other helmets of the Sochi workshop. They do not form a fully symmetrical high, rounded arch. Instead, the cutouts tapers out towards the outer edges of the face (eyes) or towards the neck guard (ears).
In both cases, the cutouts are framed by a wide, heavily offset edge, lending them a bulging appearance. The inner edge around the eyes narrows as it moves towards the nose guard, while the outer edge retains its width. The edges framing the ear cutouts retain their width throughout.
The eye cutouts merge into a long, narrow, flat nose guard that would have finished off with a diamond shape. However, the tip has broken off.
The neck guard, like the remaining helmet body, is mainly vertical, with a slight outward flare and slight rounding. It finishes at the bottom with a wide, horizontal rim.
Neither of the cheekpieces survived. However, the hinge components of both sides are quite well preserved, each consisting of three looped flaps through which the hinge pins would have been inserted. There are no traces of riveting. Only the front section of the right hinge pin, together with a very small piece of the left one, has survived.
Hinge tooth ratio is 3:2.
Only the right cheekpiece survived in two fragments, basically preserving the full shape. Its intact hinge component contains two looped flaps, which would interconnect with the three

teeth of the upper hinge components, both of which are still in place on both sides of the helmet. Only the left hinge pin has survived and remains in place in the left hinge component.

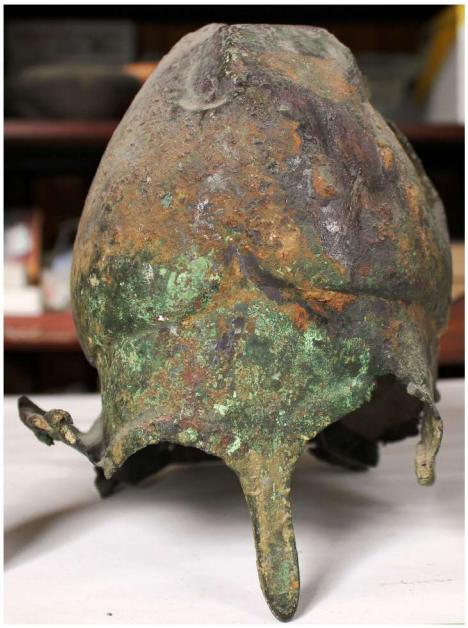
Comparisons: This helmet is a close analogy to Soc/H-03, especially the dome form and offsetting at the forehead, and clearly belongs to the Sochi workshop.

Location details: State Pushkin Museum, Moscow. Inv. no: II 1e 3093.[1]
Literature: Iskold'skaia 2006, 3, 6, Kat. No.10.

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[1] I would like to thank Dr. Vladimir Tolstikov, Curator of Antiquities at the Pushkin Museum, for his kind permission and assistance in photographing this and other items in the museum collection.

Nov/H-01



A. Nov/H-01, front.
(Photograph: S. Chandrasekaran)



B. Nov/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Khosta workshop
Find site: near Lazerevsk
Find context: According to B. Farmakovsky, this complex was apparently uncovered in 1916. While he notes that there is no information as to whether this complex was part of a burial or not, the other items found together with the helmet indicate a burial context. Other finds included a short iron spear, a silver bowl with relief depictions of a centauromachy and some golden jewelry and applications.
Dating: The complex is dated to the 1st third of the 4th century BC based on the burial assemblage and the terracotta find, in particular.
Material: Bronze.
Measurements: approximately, w/o cheekpieces. H = 20.5cm; W = 13.5cm
Other weapon finds: Three fragments of a short iron spear (46cm).
Preservation: The helmet is heavily damaged bent out of shape. The upper-rear section of the dome is missing. The nose guard end is bent and torn, Both cheekpieces are missing (true?) and the hinge components have been severely bent out of shape. There is also a lot of overall denting and flaking of the surface metal, as well as traces of heavy oxidation. The helmet was only minimally conserved, but is due to undergo proper restorative treatment in the near future.
Description: The helmet consists of an elongated dome (now smashed into a bulb-shape) which is clearly offset from the long helmet body of a somewhat smaller diameter.
The base of the dome is oval-shaped. The sides display a clear bulge at the bottom before narrowing pointedly towards the top. This would originally have led to a distinct upper edge that ran from front to back of the dome (which would have resembled an elongated acorn shell when viewed from the front).
The forehead section of the dome is offset to form a medium-sized, elegantly curving gable with pronounced indentation.
The helmet body is long, its sides fall vertically and slightly outward.
The front and sides of the helmet rim are marked by cutouts for both the eyes and ears.
The eye cutouts consist of wide, relatively shallow arches. The ear cutouts, on the other hand, consist of simple, high arches.
The eye cutouts are framed by an offset edge, which narrows as it reaches the nose guard, but otherwise retains its width. The corrosion of the surface make it difficult to discern any clear traces of ornamentation along the edge.
The ear cutouts are distinguished only by a tiny outward flare of the edges.
The cutout eyes join to form a long, narrow nose guard that finishes off with a rounded edge. It is marked by a thin, 'piped' edge lining its contours.
The neck guard, like the remaining helmet body, is long and vertical, with a slight outward slant. While the lower section is damaged, it appears to have originally flared into a clearly distinct rim.
The cheekpiece form cannot be described here as they are currently in storage and

inaccessible.
The hinge sections and components of the helmet body have survived. The left side retains its original shape, while the right section has been bent severely upward.
The hinge components were created by folding the lower rim of the hinge section inward, creating a long fold, from which squarish sections were cut out to form the teeth/flaps for the hinge pin. A long horizontal rim from the fold remained above the flaps and hinge pin. The left hinge component is almost fully intact - only the hinge pin is missing. Of the bent right hinge component, much of the inner flap rim and teeth is no longer preserved, nor are any of the rivets or the hinge pin.
The hinge tooth ratio is 4:3.
There is no sign of riveting.

Comparisons: This helmet is very similar to Kho/H-01 and must stem from the same workshop.
Location details: Novorossiysk Museum. Inv. no. 08 or 80.
Literature: Chernenko 2006, no .571?; Farmakovsky 1921.

Piv/G-01

NO IMAGE AVAILABLE

Find site: Khutor Pivneva
Find context: Found in a kurgan near the khutor (village) of Pivneva.
Dating: The burial is dated to the turn of the 5th to 4th century BC.
Material: Bronze.
Single/Pair: pair
Preservation: The greaves are now lost. No images of them were ever made.
Description: No information available.
Literature: Galanina 1965, no. 8; Sokolsky, N. I. 1954. Bosporskie mechi. MIA no. 33. 178, no.27; OAK (for 1870-1), xv.

Pkh/H-01

[Image removed due to copyright restrictions]

A. Pkh/H-01, front.
(Photograph courtesy of E. Khachaturova)

[Image removed due to copyright restrictions]

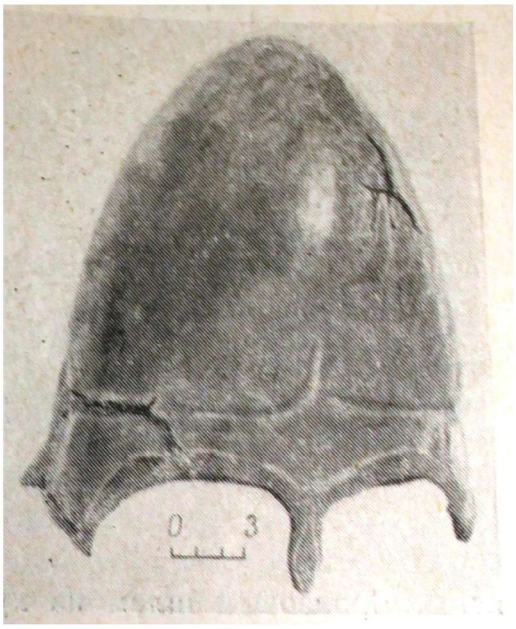
B. Pkh/H-01, left profile.
(Photograph courtesy of E. Khachaturova)

Helmet type: Chalcidian type V
Find site: Pkhiya
Find context: Found in a damaged kurgan near the Pkhiya River. Other finds included yet another helmet of unknown form.
Dating: Unknown. Probably 4th century BC.
Material: Bronze. Apparently polished to a golden colour.
Other weapon finds: Another helmet. Unfortunately, no information on the helmet is available.
Preservation: According to Chernenko, the cheekpieces were missing.
The helmet was cleaned in Moscow, and has now been fully reconstructed with cheekpieces.
Description: The helmet form consists of a large, ellipsoidal dome set atop a lower body of smaller diameter, from which it is distinctly offset.
The helmet dome is of a non-symmetrical ellipsoidal shape at the base. The sides rise high before narrowing towards the top, resulting in a soft crease marking the crest. The helmet dome appears to peak from the front, yet remains semicircular in profile.
The forehead section of the dome is offset to form a elegantly curved, high, wide gable. The gable form is reminiscent to that of the Kekuvatsky helmet Kek/H-01.
The relatively long helmet body falls vertically.
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are wide and rather shallow. They are framed by an ornamental ornamental border that is slightly offset from the helmet body.
The borders peak above the inner section of the eye and narrow slightly towards the outer edges. They thin more severely towards the inner edges, turning downwards at the nose bridge to follow the line of the nose guard as a thin frame.
The rounded ear cutouts form a high arch. They are marked only by a slight flare of the edges.
The helmet rim is marked at the centre by a short, rounded, diamond-shaped nose guard, similar to that of Ke/H-01.
The long neck guard falls in an elegant outward curve which flares at the end to form a short, rounded brim at the nape of the neck. The neck guard sides droop to form short, rounded lappets which hang below the nape and curve slightly forward towards the cheekpieces.
Both hinge components - both upper and lower - survive. This includes inner flaps of the upper components, the hinge 'teeth', most of the rivets and the hinge pins, which only show the slightest signs of damage.
The hinge component is a 4:3 construction.
It is unclear whether the restored cheekpieces are actually the originals. They have a long shape, curving forward with rounded ends.

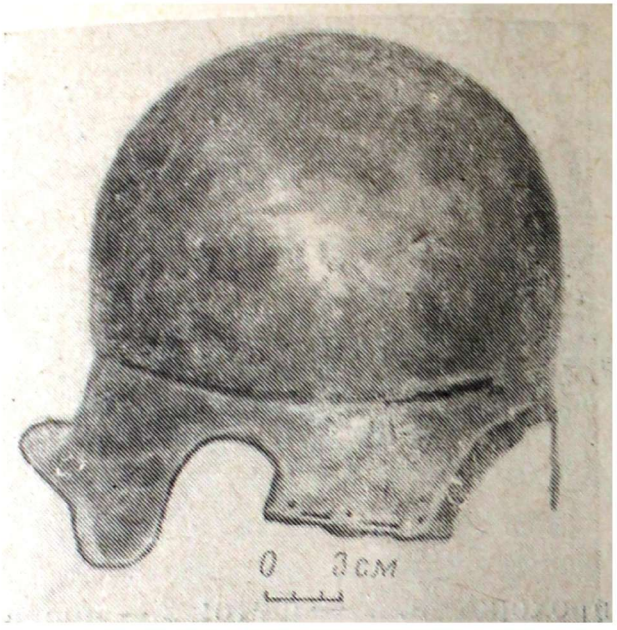
Comparisons: This helmet bears many similarities, included its golden colouring, to the Kekuvatsky helmet Kek/H-01, and is clearly a typical example of 'standard' Chalcidian type V helmets.

Location details: Krasnodar State Museum of History and Archeology. Inv. no: KM 2014/1
Literature: Chernenko 2006, no. 571.

Ros/H-01



A. Ros/H-01, front. (After Kosyanenko, Lukyashko, Maksimenko 1978, Fig. 2)



B. Ros/H-01, right profile.
(After Kosyanenko, Lukyashko, Maksimenko 1978, Fig. 1)

Helmet type: Chalcidian type 'Sochi'
Find site: Sovetkvadzhe
Find context: Unknown. Brought to the museum in 1963 by a man from Rostov, A. Pekar, According to him, the helmet was found along the Black Sea coast close to the resort hotel 'Smena' near the village of Sovetkvadzhe.
Dating: Unknown. Probably 4th century BC.
Material: Bronze.
Measurements: H = 23.5; L = 21.5; W = 18.
Preservation: The left side suffered serious damage, including tears and severe denting. The cheekpieces did not survive.
Traces of iron were visible on the right surface of the helmet.
Description: The helmet form consists of an elongated, semicircular dome set atop a rather short body, from which it is slightly yet distinctly offset.
The helmet dome is semicircular at the base, but with a high upward slant, resulting in a distinct, softly rounded upper edge running from front to back. Thus the helmet dome appears to peak from the front, yet remains semicircular in profile.
The forehead section of the dome is offset to form a flat, short gable which forms a short yet clear indentation in the middle. The gable form is reminiscent of what we observe on helmet May/H-01.
The helmet body is relatively short, with a pronounced outward slant.[2]
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are markedly wide, the arches not too high. They are lined with a wide, offset edge. The edges retains its width from the outside of the eyes all the way to the midpoint between them, where they join before turning downward to narrow into the outer edges of the nose guard, which they then frame as a thin, decorative edge.
The ear cutouts are far less remarkable, marked only by a slight flare of the edges.
The eye cutouts join in the centre of the helmet to form a short, diamond-shaped nose guard.
The neck guard retains the clear outward slant of the remaining body. It flares gently at the nape into a brim with rounded outer edge. The neck guard sides droop into rounded folds hanging below the brim.
While the cheekpieces have not survived, the published photographs (Figure 2) show that the right hinge component is still intact. It consists of three hinge teeth, with the respective rivets apparently still in place. The photographs also show traces of the hinge wire (bronze). The hinge tooth ratio is 3:2.
It is unclear whether the left hinge component has survived.

Comparisons: The helmet features described here are typical of most 'Sochi' type helmets. Particularly interesting is the riveting of the upper hinge flaps, which is otherwise only found on helmet Gel/H-01.

Location details: Rostov Museum.
Literature: Chernenko 2006, no. 570;
Kosyanenko/Luk'yashko/Maksimenko 1978.

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[1] Unfortunately, I was unable to view the helmet personally. Therefore, I am particularly grateful to my colleagues at the Rostov Museum for providing me with a copy of the above-mentioned literature on this helmet.

[2] The outward slant might not be natural but the result of damage over time/soil pressure from inside etc. However, this cannot be fully ascertained without viewing the helmet properly.

Soc/H-01

[Image removed due to copyright restrictions]

A. Soc/H-01, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

B. Soc/H-01, right profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: Khosta Region
Geographic location: In the Greater Sochi area.
Find context: From a burial discovered in the village of Bogushevka (greater Sochi area).[1] Obviously found *before* 1979. The burial also included some beads of amber and glass paste.
Dating: Unknown. Probably 4th century BC.
Material: Bronze. The metal sheet is quite thick.
Other weapon finds: Two iron spearheads.[2]
Preservation: The helmet has been restored for exhibition and is therefore in very good shape.
Original damage includes a torn/split upper dome section, a fragmented section in the rear of the helmet, and the torn lower neck guard rim. The small symmetrical scratches on the surface attest to cleaning of heavy corrosion.
The tears have been mended, the fragmented rear section and torn neck guard rim have been replaced. The silvery surface colour has also been restored to most of the helmet. Only some traces of the previous heavy oxidation of the metal remain.

Description: The helmet consists of a rather, egg-shaped dome with elongated tip, set upon a long helmet body of a somewhat smaller diameter, creating a small yet distinct offsetting of the dome. The helmet material is quite thick.
The base of the dome is oval-shaped. The dome itself narrows as it rises towards the top, resulting in an upper edge that runs from front to back. The elongation and egg shape are the result of restoration: the split sides of the dome have been rejoined along a wire running from front to back of the dome, raising the original height and exaggerating the originally soft upper edge.
The forehead section of the dome is offset to form a narrow, square-shaped gable. The gable curves roughly into a rather high yet slight indentation which is slightly off-centre.
The helmet body is long, All its sides falling vertically, with a slight rounding to it the back, as if continuing the rounded line of the dome towards the bottom.
The front and sides of the helmet rim are marked by high, arched cutouts for the eyes and ears.
In both cases, the cutouts are framed by a wide, heavily offset edge. The eye borders are wider in the middle and narrows towards the outer edges. The ear borders, however, retain their width throughout. Note that the eye borders are extremely wide on this helmet as compared with other helmets of the Sochi workshop.
The cutout eyes join to form an extremely wide, flat nose guard roughly shaped into an elongated diamond.
The neck guard, like the remaining helmet body, is long and vertical, but displays a slight

inward curvature (as if continuing the curve of the helmet dome). Its distinct feature is the wide, horizontal rim that flares from its end.
Only the right cheekpiece has survived and is preserved in its entirety, displaying a hinge component with two looped flaps, which would interconnect with the three teeth of the upper hinge components, both of which are still in place on both sides of the helmet. Only one hinge pin has survived and remains in place in the left hinge component. No rivets were used on the upper component.

Comparisons: Amongst all helmets of the Sochi workshop, this helmet is closest to Soc/H -02.
Location details: Sochi Historical Museum. Inv. no: 4046_1.
Literature: Chernenko 2006, no. 585;
Voronov 1979, 64, 67.

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[1] This is according to Voronov. However, there is actually no information on record at the museum as to when, how and from where the piece was actually acquired.
[2] Voronov 1979, 64.

Soc/H-02

[Image removed due to copyright restrictions]

B. Soc/H-01, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

B. Soc/H-01, right profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: 'Adler Region'
Find context: Chance find from one of the many damaged burial complexes in the Greater Sochi area, probably from the Adler region. The helmet was presented to the museum in 2002.
Dating: Unknown. Probably 4th century BC.
Material: Bronze. The metal sheet is quite thick.
Measurements: Helmet: H = 22.4, L = 25.5, W = 20.3.
Preservation: Much damage. The main damage is the gaping hole running along the helmet dome, running from brow to neck guard and splitting the dome in two. The rear horizontal rim of the neck guard is partly torn from the helmet body. Both cheekpieces are missing. Also further signs of denting. Strong corrosion. Heavy oxidation has left the helmet completely green.
Description: The helmet consists of a short, semicircular dome set upon a long helmet body of a somewhat smaller diameter, creating a small yet distinct offsetting of the dome.
The base of the dome is oval-shaped. The dome narrows as it rises towards the top, thus creating a weak crease along the helmet crest.
The forehead section of the dome is offset to form a medium sized, roughly curved gable, part of which is not visible due to the missing section of the dome. The gable form is exactly the same as that of Soc/H-01.
The helmet body is long, All its sides falling vertically, with a slight rounding to it the back, as if continuing the round line of the dome.
The front and sides of the helmet rim are marked by high, arched cutouts for the eyes and ears.
In both cases, the cutouts are framed with a wide, heavily offset edge (more distinct than that of the helmet dome). The edges around the eyes narrow towards the bottom, forming a crescent around the cutouts, whereas the edges framing the ears retain their width throughout.
The cutout eyes join to form an extremely wide, flat nose guard roughly shaped into an elongated diamond.
The neck guard, like the remaining helmet body, is long and vertical, but displays a slight inward curvature (as if continuing the curve of the helmet dome). Its distinct feature is the wide, horizontal rim that flares from its end.
While the cheekpieces have not survived, the upper hinge components of both sides are still intact. They each consist of three hinge teeth. The hinge pins (iron, judging by the rust traces) have not survived. No rivets were used on the upper component.
The hinge tooth ratio is 3:2.

Comparisons: This helmet is a typical example of the Sochi workshop and almost identical to the helmet Soc/H-01.t

Location details: Sochi Historical Museum. Inv. no: 12553_1
Literature: Sochi Historical Museum inventory records.

Soc/H-03

[Image removed due to copyright restrictions]

A. Soc/H-03, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

A. Soc/H-03, right profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: 'Adler Region'
Find context: Chance find from one of the many damaged burial complexes in the Greater Sochi area, probably from the Adler region. The helmet was presented to the museum in 2002.
Dating: Unknown. Probably 4th century BC.
Material: Bronze. The metal sheet is quite thick.
Measurements: H= 23; L = 21.8; W= 22.6; Cheekpiece: H = 11.5; W = 8.8.
Preservation: Damage to the helmet includes the split along the upper and rear sections of the dome, almost splitting the helmet in two along the skull. Three fragments survive from the damaged neck guard. The lower neck guard rim also survived, broken off from the helmet, in two fragments. Damage holes also visible along the split in the front section of the dome, with a small crude hole on each side of this (perhaps repair holes). Only the right cheekpiece has survived in two fragments, with some damage along the edges. This is also damaged/ torn at the bottom and along the curved inner side. Both helmet and cheekpiece suffered heavy corrosion and oxidation, which leaves only traces of the original silvery surface visible. All pieces have only undergone preliminarily conservation and have yet to be properly restored.
Description: The helmet consists of a short, semicircular dome set upon a long helmet body of a somewhat smaller diameter, creating a small yet distinct offsetting of the dome.
The base of the dome is oval-shaped. The dome narrows steadily as it rises towards the top, thus creating an upper edge that runs from front to back.
The offsetting of the forehead section of the dome forms an extremely flat pyramid of a gable, (similar to NBS/H-01).
The helmet body is long, All sides fall vertically, with a slight bulge.
The front and sides of the helmet rim are marked by high, arched cutouts for the eyes and ears.
In both cases, the cutouts are framed by a wide, heavily offset edge. The edges around the eyes narrow towards the bottom like a crescent, whereas those around the ears retain their width throughout.
The cutout eyes join to form an wide, flat nose guard roughly shaped into an elongated diamond.
The neck guard is longer than the remaining helmet body (drooping below the nose guard and cheekpiece hinges). Like the remaining helmet body, it remains vertical yet slightly rounded. The wide, horizontal rim that would have flared from its end was broken off (or perhaps torn off), but survived in two fragments.
Only the right cheekpiece survived in two fragments, basically preserving the full shape. Its intact hinge component contains two looped flaps, which would interconnect with the three teeth of the upper hinge components, both of which are still in place on both sides of the helmet. Only the left hinge pin has survived and remains in place in the left hinge

component. No riveting was used to close the upper hinge flap.
The hinge tooth ratio is 3:2.

Comparisons: This helmet is a close analogy to NBS/H-01, especially the dome. The same or extremely similar forms must have been used for these helmets, which must stem from the same workshop.
Location details: Sochi Historical Museum. Inv. no: 12553_2
Literature: Sochi Historical Museum inventory records.

Soc/H-04

[Image removed due to copyright restrictions]

A. Soc/H-04, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

A. Soc/H-04, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: 'Adler Region'
Find context: Damaged burial complex. Presented to the museum in 2002.
Dating: Unknown. Probably 4th century BC.
Material: Bronze.
Measurements: H = 19.5cm; L = 25.5; W = 21.6cm.
Preservation: Much damage to the upper and front sections. The upper part of the dome is split along the upper edge all the way to the brow. Both cheekpieces missing. Part of the left eye cutout is missing. The right part of the neck guard flare is damaged/torn off. A number of tears are also visible throughout.
The helmet was cleaned, but has yet to be fully restored.
The silver-coloured surface of the helmet is partially visible. The former oxidised state of the metal is still apparent.
Description: The helmet form consists of a short, semicircular dome set atop a long, vertical body, from which it is slightly offset.
The helmet dome is semicircular at the base, but with an upward slant, resulting in a upper edge, which is especially visible from the front.
The forehead section of the dome is offset to form an almost horizontal line, with a tiny triangular gable in the middle.
The helmet body is long, with a mild, slightly rounded outward flare.
The front and sides of the helmet rim are marked by high, arched cutouts for the eyes and ears. The cutouts for the eyes are especially large and rounded, making them almost fully circular.
In both cases, the cutouts are framed with a wide, offset edge. The edges around the eyes narrow towards the bottom, forming a crescent. Together with these edges, the eye cutouts appear rather bulgy, similar to Soc/H-05.
The offset edges framing the ears are similar in width to those of the eyes, but retain their width throughout
The eye cutouts join in the centre of the helmet to form a flat nose guard that finishes off with a wide, diamond-shaped end.
The neck guard, like the remaining helmet body, is long and falls in a slightly rounded vertical. It finishes off with a wide, horizontal rim.
While the cheekpieces have not survived, the right hinge component is still intact. It consists of three hinge teeth, with the hinge pin still in place. The left hinge component has been torn off. No riveting was used to close the upper hinge flaps.

Comparisons: All features are typical for the helmets of the Sochi workshop.
Location details: Sochi Historical Museum. Inv. no. 12553_3.
Literature: Sochi Museum inventory records.

Soc/H-05

[Image removed due to copyright restrictions]

A. Soc/H-05, front.
(Photograph: S. Chandrasekaran)

[Image removed due to copyright restrictions]

A. Soc/H-05, front.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type 'Sochi', Sochi workshop
Find site: Khosta Region
Geographic location: In the Greater Sochi area.
Find context: Chance find from a destroyed burial complex close to Stanitsa Progress in the Khosta Region of the Greater Sochi area. It was brought to the museum in July 2002.
Dating: Unknown. Probably 4th century BC.
Material: Bronze.
Measurements: Helmet: H = ca. 20.2cm, L = 27.3cm, W = 18.2cm; Cheekpiece: H = 7.1cm, W = 8.4cm.
Preservation: The helmet was bent and dented upon discovery, with traces of rust and damage to the silver-coated surface. The dome had split along the its upper edge all the way to the neck guard in the back. Half of the neck guard-rim is missing. Only the rather damaged right cheekpiece has survived. The helmet was heavily corroded and has oxidised. Only traces of the original silvery surface are now visible. The helmet has only been cleaned of corrosion and has yet to be fully restored.

Description: The helmet consists of a high, semicircular dome set upon a long helmet body of a somewhat smaller diameter, creating a slight yet distinct offsetting of the dome.
The base of the dome is oval-shaped. The dome narrows as it rises towards the top, thus creating a distinct yet soft edge running from front to back. (The damage to the dome has distorted the original narrowed shape, leaving it looking more rounded at the top than it would have been.)
The forehead section of the dome is offset to form a practically flat gable, the full shape of which is barely visible due to corrosion. The straight horizontal line at the bottom indicates that the gable would have probably been angular, perhaps with a slight triangular gable indentation marking the middle.
The helmet body is long, All its sides fall in a slightly rounded vertical, as if simply continuing the round line of the dome.
The front and sides of the helmet rim are marked by high, arched cutouts for the eyes and ears. The cutouts for the eyes are especially large and rounded, making them almost fully circular.
In both cases, the cutouts are framed with a wide, yet softly rounded offset border, which lend the already large eyes a particularly bulging effect. The borders are wider in the middle and narrow towards the outer edges. The bulging borders of the ear cutouts retain their width throughout.
The eye cutouts join in the centre of the helmet to form a wide, flat nose guard in an elongated diamond shape (the tip of which is chipped off).
The neck guard, like the remaining helmet body, is long and falls in a slightly rounded vertical. Its distinct feature is the wide, horizontal rim that flares from it at the bottom (partially broken).

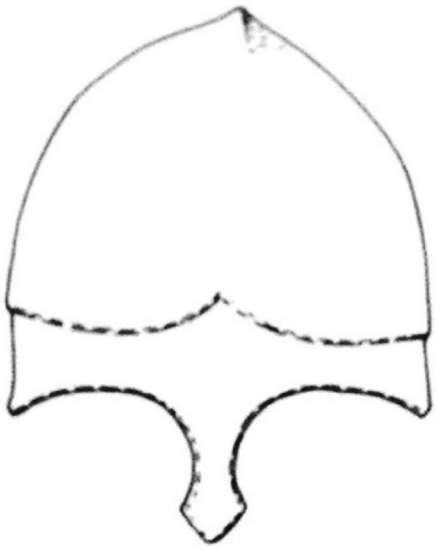
The surviving right cheekpiece, of which only the upper half survives, still retains enough of its original shape to indicate that it was similar to most of the other cheekpieces found on the Soc type. The hinge component is still intact and shows two inner hinge teeth that fit into the gaps of the upper hinge components.
The upper hinge components have both survived, yet not to the same degree of preservation. The right component - with all three teeth - is well preserved (with the exception of partial damage to the tooth closest to the ear. The left component has lost two out of three tooth, seemingly to corrosion, yet the inner tooth edges remains intact, as does the tooth closest to the eye. There are no traces of riveting along the upper hinge components.
The hinge tooth ratio is 3:2.
The hinge pins seem to have been cleanly remove in both components (leaving traces of the iron material at the loop edges).

Comparisons: This helmet has all the typical features of the Sochi workshop.
Location details: Sochi Historical Museum. Inv. no: 12599_1.[1]
Literature: Sochi Historical Museum inventory records.

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[1] All my work on the Sochi inventory made possible by the Director Alla Guseva, Assis. Director Margarita Karatsuba and Curator Elena Galysheva.

Teb/H-01



A. Teb/H-01, front.
(After Chernenko 2006, Taf. 28, no. 578)

Helmet type: Chalcidian type V, possible type 'Sochi'
Find site: Teberda
Find context: Part of a burial uncovered by chance during construction taking place in Dombay, in the Mukhu Gorge (Teberda State Reserve, Karachayevo-Cherkessiya), the southern border of which is formed by the main Caucasus ridge. The burial also contained remains of a horse burial, bronze jewelry, some weapons and some pottery.
Dating: The complex is dated from the 6th-4th centuries BC based on the finds.
Material: Bronze.
Other weapon finds: Three iron spears and a short iron sword.
Preservation: Originally preserved in fragments. The upper section of the dome was damaged. Only the damaged right cheekpiece survived. Note: the cheekpiece is not visible in the only surviving drawing (shown here).
The helmet is now lost.
Description: The helmet consists of a large rounded dome set atop a lower helmet section of lesser diameter, from which it is distinctly offset.
The dome is large and quite circular, with the sides only narrowing just at the top to form a distinct crest or ridge running from front to rear - this is probably the 'bronze attachment' mentioned by Chernenko (2006) used to fasten a helmet decoration at the top.
The forehead section of the dome is offset to form a shallow, widely curved gable.
The helmet body is rather short. The sides fall vertically, with a tiny outward slant.
The front of the helmet body is marked by wide, shallow, arched cutouts for the eyes.
The eye cutouts join in the middle to form a long, wide nose guard which finishes in a squarely diamond-cut tip.
The available drawing does not reveal any decorative features of the helmet.

Comparisons: It is difficult to compare this helmet with others based on the single available drawing. However, the form of the nose guard and the tinned surface may indicate it to be of the 'Sochi' type.

Location details: Unknown. Originally brought to the Teberda Regional Museum.
Literature: Chernenko 2006, no. 578; Alekseeva 1992, no. 81; Arsenin, Bondarev, Sergievsky 1976.

Tem/H-01



A. Tem/H-01, front.
(Photograph: S. Chandrasekaran)



A. Tem/H-01, left profile.
(Photograph: S. Chandrasekaran)

Helmet type: Chalcidian type V
Find site: Temnolesskaya
Find context: A 'chance find' from the kurgan-flat grave cemetery ca. 3.5km away from Stanitsa Temnolesskaya. The helmet itself was discovered by a worker from the village, K. S. Andreev, in 1961, on the second of three kurgan terraces. Further investigations showed it to have come from an external burial along the slope of the kurgan terrace, some 30m away from the nearest kurgan. The partially damaged helmet contained a skull which immediately crumbled to dust. The helmet was brought to the Maykop Museum in the same year.
Dating: Unknown. Probably 4th century BC.
Material: Bronze.
Preservation: The helmet was essentially in good shape. Damage included a large missing upper-rear section of the helmet dome and neck guard (due to oxidation), a broken nose guard, some denting and tearing as well as missing cheekpieces and hinge components. Only the riveted sections of the latter have survived.
The metal shows the effects of heavy oxidation and some corrosion. The helmet has now been fully conserved.
Description: The helmet consists of a short, ellipsoidal dome set atop a longer lower section of smaller diameter, from which it is distinctly offset.
The helmet dome is egg-shaped at the base, wider in the face and narrow at the back. The sides narrow as they rise, resulting in a softly rounded helmet crest. Thus the helmet dome appears to peak from the front, yet remains semicircular in profile.
The forehead section of the dome is heavily offset to form a wide, elegantly curved, high gable. The gable form is exactly the same as that of Kok/H-01.
All sides of the long helmet body fall vertically except the back, which falls with an outward slant.
The front and sides of the helmet rim are marked by arched cutouts for the eyes and ears.
The eye cutouts are wide and relatively shallow. They are framed by a wide ornamental border which is only minutely offset from the helmet body.
The ornamental border peaks above the eyes and narrows towards the inner and outer edges. Both borders turned downwards at the nose bridge to follow the edges of the nose guard, which is broken at the nose bridge.
Note: the eye borders are pressed inwards, resulting in a slight inward slant, thus reducing the optical illusion of large eyes created by the cutouts themselves.
The ear cutouts are generously rounded, forming almost a complete circle. They are marked only by a slight flare of the edges.
The neck guard is fairly long. The main section falls in a straight, slightly outward slant, with a short, curved flare at the end. The sides of the neck guard droop forward into short, rounded lappets which hang lower than the flared rim.
Very little of the upper hinge components have survived, as the lower helmet sides were

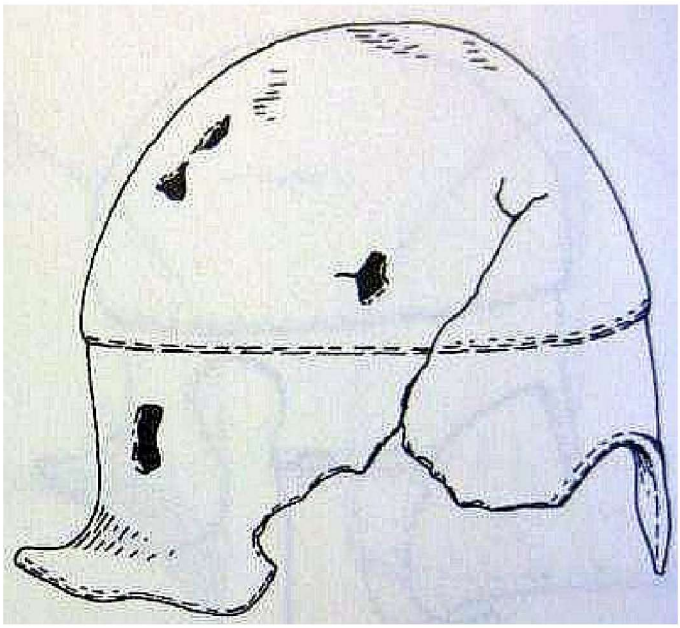
apparently cut off deliberately in a clean line just below the rivets. As a result, only bits of the inner component flaps survive around the remaining rivets (two on the left, three on the right).
There is nothing to indicate the hinge tooth ratio.
The hinge tooth ratio is 3:2.

Comparisons: This helmet is identical to the helmet from Kokhi Kok/H-01, and can therefore be attributed to the same workshop.
Location details: National Museum of Adygea, Maykop. Inv. no. AOM 9629.
Literature: Chandrasekaran 2009; Chernenko 2006, no. 575;[1] Ditler 1964;

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* I am extremely grateful to Dr. Fatima Dzhigunova, Director of the National Museum of Adygea, for allowing me to work with this helmet (and other material) and photograph it.
[1] Chernenko mistakenly places the helmet in the Krasnodar Museum.

Tul/H-01



A. Tul/H-01, right profile.
(After Chernenko 2006, Taf. 28, no. 577)



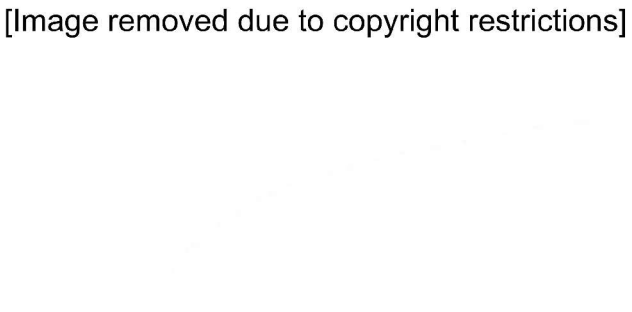
B. Tul/H-01, right profile.
(After Lunin 1939, Fig. 4)

Helmet type: Chalcidian type V
Find site: Tulskaya
Find context: Found in 1935 by workers in a burial in the *Zolotaya gorka* kurgan near the town of Tulskaya, on the Kurdzhips River. The burial also included bridle parts, two stamped plaques, a pendant and a golden stater of Alexander the Great.
Dating: The burial is dated to the 4th century BC based on its assemblage.
Material: Bronze.
Preservation: In one piece. Tears and other surface damage. The sides are damaged at the ears. The cheekpieces are missing.
The whereabouts of the helmet remain unknown. The single available image shows it only in profile.
Description: The helmet form consists of a rounded, slightly offset bowl over a lower helmet section.
It is unclear whether the offsetting at the forehead is truly gable-shaped or simply a horizontal line.
The facial section is marked with high eye cutouts and a long, thin nose guard. The eyes are lined with a thin ornamental border which apparently has been pressed inward, similar to the helmets of the Temnolesskaya workshop.
Nothing remains of the ear cutouts or hinge components. No hinge tooth ratio is visible.
The neck guard falls vertically and finishes with a distinct horizontal rim, similar to the helmet Mez/H-04.

Comparisons: This helmet displays the usual features of the 'standard' Chalcidian type V helmets. Note the similarities to the helmets named above.
Location details: Unknown.[1]
Literature: Chernenko 2006, no. 577; Rabinovich 1941, 149; Lunin 1939, 214-220, Fig. 4.

[1] Chernenko mentions it as part of the collection of the State Historical Museum, Moscow.

UP/G-01



A. UP/G-01, profile - front.
(Photograph: S. Chandrasekaran)

Greaves type: Classical, full-length
Find site: Krasnodar region
Find context: Unknown. From the old collections of the Krasnodar Museum.
Dating: Unknown.
Material: Bronze.
Single/Pair: right greave
Measurements: L = 38, W = 10.
Preservation: Only the lower half of the right greave survives, mainly the front and part of one side. The golden-coloured patina is well-preserved.

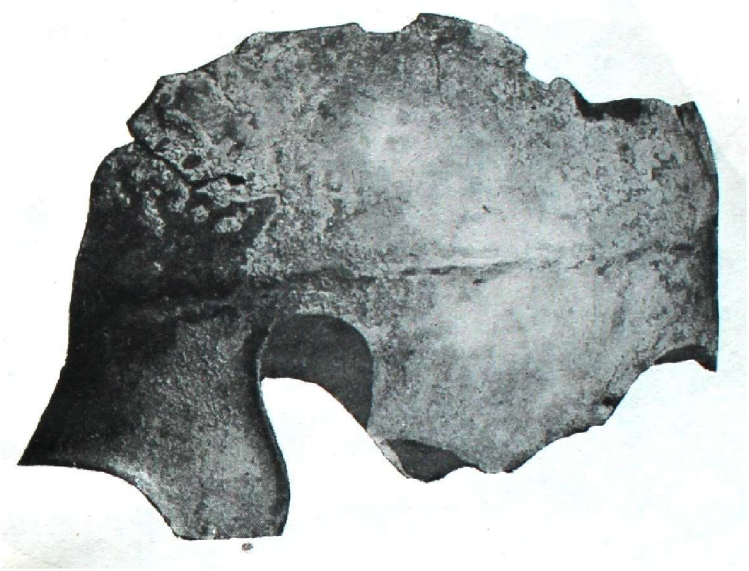
Description: Right greave only.
Form: The lower section of a slender, form-fitted full-length greave - kneecap and most of the calf sections damaged. The remaining lower leg section consists of a narrowing shin, which finishes at the ankle with an elongated yet slight outward flare to the front. No section of the lateral edges remain, and, subsequently, no indication of their eventual curvature from knee to outer calf.
Anatomical details: Very little of the reduced anatomical details has survived. What remains includes a slight horizontal swell of the tibialis is discernible. Another small swell at the bottom of the calf section appears to mark the top of the peroneus.
The shinbone is a wide, rounded vertical fold.
The bottom edge is rounded at the sides and curves upward towards the back. All greave edges are smoothly cut and have no ornamental border. There were also no perforations lining the original piece.
Reworking: The back edge is bent slightly outward, as if the back edges were once pried apart. Another sign of secondary usage is the uneven perforations set in pairs and aligning the outer edge at regular intervals from top to bottom. The reconstruction of the greave suggest their use for a criss-cross binding of the greaves in the back.
Summary: The defining features of this greave are the slenderness and tapering of the lower leg, the extremely reduced swells marking the surviving anatomical details, the wide-folded shinbone and the lack of ornamental border. Particularly significant are the bent back edge and uneven perforations resulting from secondary usage.

Comparisons: This greave is almost identical to the greave from Kul-Oba (KO/G-01), perhaps indicative of a shared workshop.
Location details: Krasnodar State Museum of History and Archeology. Inv. no. KM 9790/82.
Literature: Khachaturova 2002, no. 627.

UP/H-01

[Image removed due to copyright restrictions]

A. UP/H-01, front.
(After Khachaturova 2002, no. 626)



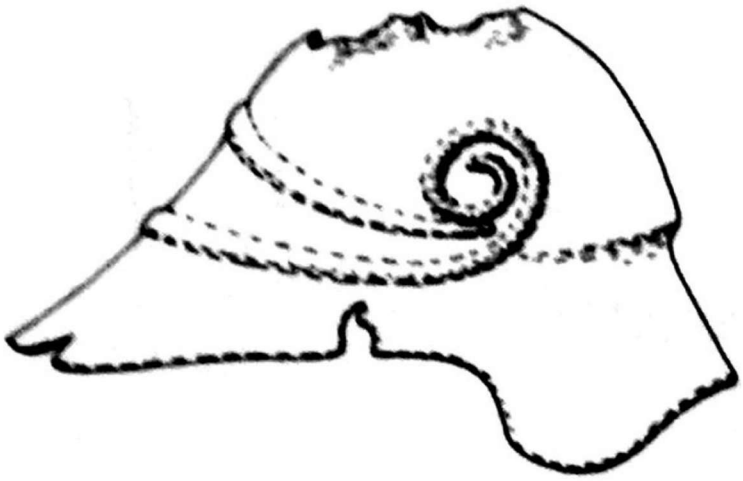
B. UP/H-01, before restoration.
(After Rabinovich 1941, Pl. 21.1)

Helmet type: Chalcidian type V
Find site: Krasnodar region
Find context: Unknown. From the old collections of the museum.
Dating: Unknown.
Material: Bronze.
Measurements: H = 30, diam. = 22.5, W = 15.
Preservation: The helmet was originally severely damaged along the top and the lower sides. The neckguard lappets were also broken.
The hinge components and cheekpieces were damaged.
The helmet has now been reconstructed.
Description: The form consists of a rounded helmet bowl set atop and slightly offset from the lower vertical section. The rear of the helmet is marked by a short neck guard.
The offset forehead is marked with a curving gable.
Almond-shaped cutouts mark the eyes. These are framed with a simple ornamental border that is accented by a series of tiny punched dots.
The nose guard does not cover the nose. Instead, it forms a 'widow's peak' just at the nose bridge.
The ear cutouts are well-rounded and not too small. The edges flare slightly.
The neck guard falls with a distinct outward slant. Its sides droop forward to form lateral lappets, of which the ends are damaged.
Perforations along a tear at the rear of the helmet bowl indicate ancient repair work.
The hinge tooth ratio is a unique 2:1.
The cheekpieces are long, with rounded ends and curving forward.

Comparisons: This is a rather unique example of a 'standard' Chalcidian type V helmet.

Location details: Krasnodar State Museum of History and Archeology. Inv. no. 9790/81.1
Literature: Limberis/Marchenko 2010, 199; Chernenko 2006, no. 569; Khachaturova 2002, no. 626; Cat. Tokyo 123, Fig. 155. 1991; Rabinovich 1941, 145, Pl. 20.1.

UP/H-02



A. UP/H-02, left profile.
(After Chernenko 2006, Taf. 29 no. 597)

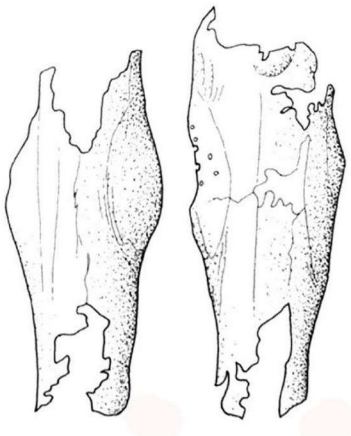
Helmet type: Attic type with visor, simplified
Find site: Krasnodar region
Find context: Unknown.
Dating: Unknown.
Material: Bronze.
Description: The helmet form consists of a rounded dome with a visor at the front and neck guard in the rear. The helmet dome was not marked with an ornamental crest.
Helmet body and visor are separated by the typical 'pediment' created by two moderately offset ridges. The upper ridge forms a wide gable that rises high, while the lower ridge is set quite low and forms the horizontal pediment base. Both ridges join together at the sides to form a spiralling volute.
The visor follows the outward slant of the helmet dome and protrudes far past the brow. Its outer edge is rounded.
The helmet body is distinctly offset from the short neck guard in the back, which shoots outward in a marked slant.

Comparisons: The the moderate offsetting of the 'pediment', together with the spiralling volute shape, is practically identical to what we find on the 'simplified' Attic helmet with visor May/H-02.
Location details: Krasnodar State Museum of History and Archeology.
Literature: Chernenko 2006, no. 597; Simonenko 1999, 134, Fig. 108.4; Anfimov 1981, 97, Fig. 5-6;

Van/G-01

[Image removed due to copyright restrictions]

A. Van/G-01, front.
(Photograph: S. Chandrasekaran)



right = left

B. Van/G-01, front.
(After Chernenko 2006, Taf. 33, nos. 693c and 693d)

Find site: Vani

Find context: Vani, central terrace, burial 9 (the 'warrior' or 'Dedatos' burial). The burial was excavated by Otar Lordkipanidze in 1969.

Dating: The burial is dated to the third quarter of the 4th century BC based on the gold stater of Phillip II, a black-glazed kantharos and a stamped amphora, all of which were part of the burial assemblage.[1]

Material: Bronze.

Single/Pair: pair

Measurements: left greave: L = 36.5. **right greave**: L = 32.

Other weapon finds: The thigh-guards Van/G-02, 53 spearheads, two daggers, and a multitude of bronze and iron arrowheads.

Preservation: Both greaves were preserved in an extremely fragmented state. Both kneecap sections are missing, both lower shins damaged, and the left inner calf removed. Much of the edges has not survived, and much of the surfaces has corroded away, leaving large gaps.

The metal suffered heavy oxidation, and extremely little of the original golden-coloured patina has survived. Note that the surfaces are heavily scratched as a result of cleaning.

The fragments have been cleaned and the form reconstructed.

Description: Greave pair.

Form: A pair of full-length greaves. The kneecap sections have been completely removed on both pieces. Part of the upper shinbone section is also missing on the right greave, leaving it somewhat shorter than its counterpart. The calf section is markedly wide and somewhat elongated (and the lower leg subsequently short). The lower leg tapers lightly towards the ankle and finishes in a slight outward, diagonal flare. The lower curve of the lateral edges from knee to outer calf is visible.

Anatomical details: Almost nothing can be said of the modelling of the kneecap and/or vastus muscles. Only the slightest bulge of the lower, outer knee remains visible on the left greave.

The thick, protruding bulge of the calf muscle is preserved on the inner right greave. It is particularly bottom-heavy and slightly elongated. Note that its circular contour is accented by a lightly hammered ridge. The same muscle appears to have been cut or broken along the exact same contour on the left greave.

The soleus is also marked by a similar, hammered ridge on both greaves.

Anterior and peroneus are marked by slight, elongated ridges/creases on both greaves.

The shinbone is given as a long, wide-folded crease of metal.

Edges: All surviving edges are lined with an ornamental border formed by two parallel incised lines. Note the identical individual perforations punched in the lower, inner corner of each greave. It is unclear whether these are part of the original greave or added at a later time, but they are indicative of the attachment of fastenings, or perhaps of some kind of repair work.

Reworking: A set of uneven perforations is also found between the missing inner calf muscle of the left greave, between the calf contour and soleus ridge. These are most likely due to the reworking of the greave, which may have also included the removal of the calf muscle, and were probably used for attachments of some kind.
Note the various holes/rounded damaged sections along the surface of both greaves. These could be indicative of perforations used for an inner lining or even repair work.
Note also the many vertical groups of 'warped' furrows marking much of the greave surfaces, together with much scratching and some symmetrically placed lines or incisions - perhaps 'tool marks'. The first may be attributed to damage done in ancient times, while the latter two are the result of modern restoration work.

Summary: The distinguishing features of this greave pair are the wide, thick shape - wide, elongated calf section with shorter lower leg section - and the hammered ridges marking anatomical details, in particular the circular contour of the calf muscle.

Location details: Vani Museum, Inv. no. 929.
Literature: Chernenko 2006, nos. 693 c-d; my photos;

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[1] Kacharava/Kvirkvelia 2008, 165.

Van/G-02

[Image removed due to copyright restrictions]

A.Van/G-02.
(Photograph: S. Chandrasekaran)

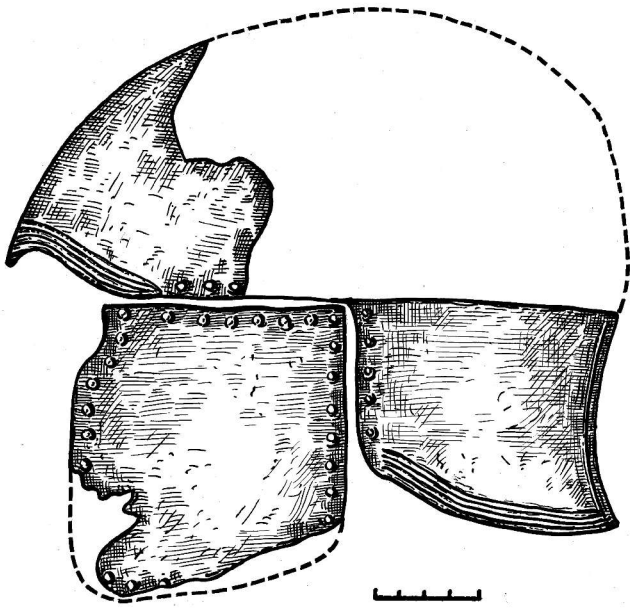
Greaves type: Thigh-guard
Find site: Vani
Find context: Vani, central terrace, burial 9 (the 'warrior' or 'Dedatos' burial). The burial was excavated by Otar Lordkipanidze in 1969.
Dating: The burial is dated to the third quarter of the 4th century BC based on the gold stater of Phillip II, a black-glazed kantharos and a stamped amphora, all of which were part of the burial assemblage.[1]
Material: Bronze. Chernenko reports the edges to have been lined with leather.
Single/Pair: pair
Measurements: left: L = 26.5, W = 16.5; right: L = 26.5, W = 15.
Other weapon finds: 53 spearheads, two daggers, and a multitude of bronze and iron arrowheads, pair of greaves (Van/G-01).
Preservation: The thigh-guards were preserved in an extremely fragmented state and have now been cleaned and restored, with many gaps and missing edges.
The surface was severely oxidised, resulting in a turquoise-green patina and only the smallest hint of the original golden colour. The heavy surface corrosion has been successfully cleaned in most fragments, but the cleaning process has left the surface with scratches and modern tool marks.
Description: Thigh-guard pair.
Form: A pair of wide, rounded thigh-guards.
Anatomical details: The entire surface is without any suggestion of anatomical details.
Edges: The edges have no ornamental border. The upper edges are lined with a row of uniform perforations.
Reworking: Large, individual perforations are visible on the right greave in the front - these could be indicative of repair work. Note also the many furrows along the entire surface. These are most likely of ancient making - reworking - but their cause or function remain unclear.

Summary: The most noteworthy details of these thigh-guards are their thick, rounded form, the perforations lining the upper edge, and the furrows along the surface.
Location details: Vani Museum, Inv. no. 929.
Literature: Chernenko 2006, nos. 693 c-d; my photos;

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[1] Kacharava/Kvirkvelia 2008, 165.

Ver/H-01



A. Ver/H-01, left profile.
(After Erlikh 2008, Fig. 1,2)

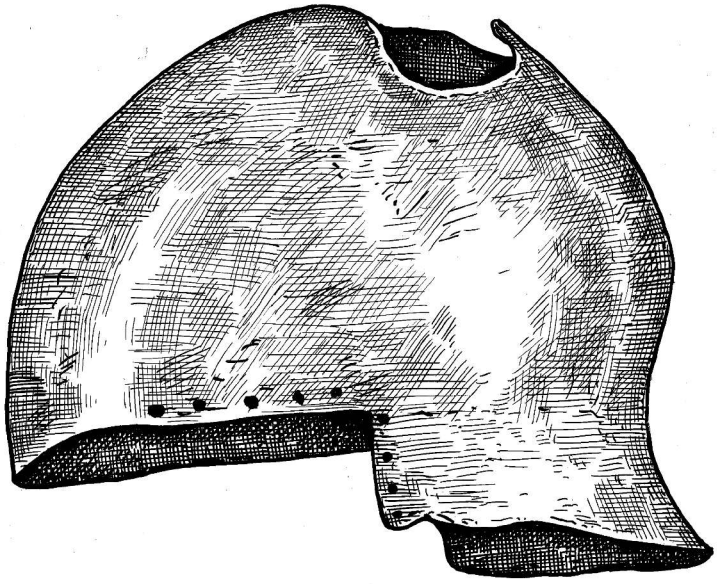
Helmet type: Chalcidian, Eshera workshop
Find site: Vereshchagin Hill
Find context: From a destroyed flat-grave burial along the eastern slope of Vereshchagin Hill. Excavated in 1971. The complex also included two sword-daggers and a bronze bracelet.
Dating: The burial is dated to the 5th-4th centuries BC.[1]
Material: Bronze.
Other weapon finds: A dagger-akinakes and a knife/short dagger, both of iron.
Preservation: Preserved only fragmentarily. Only two fragments - forehead section and neck guard - and one (left) cheekpiece have survived.
Description: The forehead section belongs to a helmet of an inverted bowl shape with no lower helmet body. The lower rim is horizontal at the sides. Three large, evenly spaced perforations line the rim, and could have been used for threading an attachment.
The helmet sides would have been wide, judging by the width of the surviving cheekpiece.
The helmet front is distinguished by shallow ocular cutouts which join in the centre to form a short nose guard. The eyes are framed by a series of four engraved lines which follow the arched line of the cutouts and narrow together towards the helmet sides.
The neck guard falls with slight inward curvature to the nape of the neck. The neck guard sides are straight verticals and do not form lappets. The outer rim of the neck guard rim is rounded and lined with four chased parallel lines, similar to the decorative lines at the forehead. Unlike the forehead decoration, the lines at the neck guard do not narrow towards the outer edges.
The vertical neck guard edges are lined with five large perforations similar to those at the helmet sides.
The surviving left cheekpiece is trapezoidal in form. The upper, left corner recedes slightly, leaving more space for the eyes and thus allowing for better peripheral vision.
The entire cheekpiece is lined by large perforations similar to those mentioned above. These are spaced evenly and line up more-or-less correctly with those of the helmet sides and, especially, the neck guard.
The large perforations at the helmet sides and neck guard indicate the fastening of cheekpieces without the use of hinges, as well as the attachment of an inner lining.

Comparisons: The helmet is clearly comparable with the other helmets of the Eshera workshop Esh/H-02, Ver/H-02, Ver/H-03.
Location details: Unknown.
Literature: Erlikh 2008; Shamba 2000, 130, Fig. 16;

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[1] This is according to G. Shamba. See Erlikh 2008, 80.

Ver/H-02



A. Ver/H-02, left profile.
(After Erlikh 2008, Fig. 1.3)

Helmet type: Chalcidian, Eshera workshop
Find site: Vereshchagin Hill
Find context: Discovered in 1978 in a damaged burial along the southern foot of Vereshchagin Hill, on a piece of property belonging to a man named Markosyan. The find complex included a selection of other weapons.
Dating: Unknown. The burial is difficult to date due to the lack of pottery. The two dagger-akinakes found together with the helmet are dated to the 6th-5th centuries BC.
Material: Bronze.
Other weapon finds: Three iron axes and two long iron daggers-akinakes.
Preservation: The helmet is well-preserved. The only heavy damage is a gaping hole at the top rear of the helmet.
The cheekpieces have not survived.
Description: The helmet consists of a large, bowl-shaped, semicircular dome. The dome covers the head all the way up to the lower brow. There is no lower helmet section.
The wide helmet sides end as a horizontal edge just above the ears. This edge is partly lined with a series of five roughly made perforations - note the discrepancy in form/size - which are large enough to be threaded.
The helmet front appears to have no ocular cutouts or nose guard. However, this could be an illusion created by the helmet angle shown in the drawing.[1]
The helmet dome curves inward into a neck guard which flares out at the nape of the neck. The neck guard does not form lappets at the sides but has straight vertical edges marked by a series of four perforations similar to those on the helmet sides.
All helmet edges - front, sides, neck guard - are without decorative features. Judging by the drawing, the helmet edges were cut and left without any kind of further finishing.
The large, threadable perforations at the helmet sides and neck guard indicate the fastening of cheekpieces without hinges, as well as the attachment of an inner lining.

Comparisons: The helmet is clearly comparable with the other helmets of the Eshera workshop Ver/H-01, Esh/H-02, Ver/H-03.
Literature: Erlikh 2008, 80, Fig. 1,3; Shamba 2000, 111; Shamba 1980, 82, Fig. 2.

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[1] Erlikh (2008, 80) notes that the photographs of this helmet published by G. Shamba do not permit a description of the nose guard. This is also true of the figure shown here (based on the above-mentioned photographs), showing the helmet at such an angle which also leaves the question of possible eye cutouts - however shallow - open.

Ver/H-03



A. Ver/H-03, front.
(Photograph courtesy of V. Erlikh)



B. Ver/H-03, left profile.
(Photograph courtesy of V. Erlikh)

Helmet type: Chalcidian, Eshera workshop
Find site: Vereshchagin Hill
Find context: Discovered in 2000 in a burial of the Hellenistic period during excavations conducted by A. Dzhopua and K. Shenkao along the western end of Vereshchagin Hill, on property belonging to S. Tulumzhyan.
Dating: The helmet is dated between the 5th and 4th centuries BC based on the other finds from this complex.[1]
Material: Bronze.
Measurements: H = 23.5, W = 18, L = 23.
Preservation: The helmet is relatively well preserved. A large tear marks the rear and left side of the helmet dome, which also shows the occasional damage hole. The right side and lower rim of the neck guard are damaged. The side rims of the helmet display only minute damage.
The cheekpieces are missing.
The helmet still bears signs of oxidation, but has been cleaned of any corrosion.
Description: The helmet consists of a semicircular or 'bowl-shaped dome, the form somewhat elongated in profile, The dome covers the head all the way up to the lower brow. There is no lower helmet section.
The wide helmet sides end with a horizontal edge just above the ears. This edge is lined with a series of eight regularly spaced perforations large enough to be threaded.
The helmet front is distinguished by shallow ocular cutouts which join in the centre to form a prominent, wide nose guard which is short, yet droops just below the nose bridge. The eye cutouts are framed by a cresent-shaped border which peaks at the centre and narrows towards the edges of the eyes. The arched border is lined with an extremely thin ridge topped by a line of tiny, decorative perforations. The border is hammered slightly inward, similar to the helmets from Temnolesskaya (Tem/H-01) and Kochi (Ko/H-01).
The neck guard is long and falls in a solid outward curve. There are no lappets at the sides. Instead, these have straight edges marked by a series of large perforations of the same size as those on the helmet sides.
The large, threadable perforations at the helmet sides and neck guard indicate the fastening of cheekpieces without hinges, as well as the attachment of an inner lining.

Comparisons: The helmet is clearly comparable with the other helmets of the Eshera workshop Ver/H-01, Esh/H-02, Ver/H-02.
Location details: Abkhazian Institute for the Humanities, Department of Archaeology.
Literature: Erlikh 2008; Dzhopua/Shenkao 2003, 7, 15, Pl. 9,1.

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* Photographs of this helmet were kindly made available to me by V. Erlikh. I would also like to thank the curator of the Gagra Museum of History and Archaeology in Abkhazia for allowing me to study and photograph the helmet while it was temporarily exhibited there.

[1] Dzhopua/Shenkao 2003, 7. The authors do not describe the remaining material in the complex.