A 5000-year-old souslik fur garment from an elite megalithic tombe in the North Caucasus, Maykop culture

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A 5000-YEAR-OLD SOUSLIK FUR GARMENT FROM AN ELITE MEGALITHIC TOMBE IN THE NORTH CAUCASUS, MAYKOP CULTURE

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Abstract. *This paper presents the results of a unique fur garment from the megalithic tomb of a rich man in the Northwest Caucasus, dated to the Early Bronze Age, which was excavated in 1898 (Tsarskaya, Russia). The garment was made from the fur of a souslik group animal, most likely the ground squirrel. Direct radiocarbon dating puts the fur at around 4445 ± 35 BP* (ca. *3300-3000 BC), making it the earliest known fur garment in Eastern Europe. The choice of souslik fur stands in direct contrast to widely held views on prestigious fur clothes in traditional and contemporary societies.*

Résumé. *Nous présentons ici les premiers résultats des analyses d'un vêtement de fourrure unique provenant de la tombe mégalithique d'un noble, datée de l'âge du Bronze ancien dans le Caucase et qui a été fouillée en 1898 (Tsarskaya, Russie). Le vêtement s'avère être en fourrure de souslik (*Spermophilus *sp., écureuil terrestre). La datation directe au radiocarbone place la fourrure aux alentours de 4445 ± 35 BP (environ 3300-3000 BC). C'est le premier vêtement de fourrure connu en Europe de l'Est. Nous ne savons pas pourquoi la fourrure de souslik a été choisi, mais cela tranche avec les opinions populaires tenues sur les fourrures de prestige des vêtements des sociétés traditionnelles et contemporaines.*

Keywords. *dolmens, Bronze Age, Caucasus, Maykop culture, mammalian fur, funeral garment, morphological analyses, isotopic analyses*

Mots-clés. *dolmens, âge du Bronze, Caucase, culture des Maykop, fourrure de mammifère, vêtement funéraire, analyse morphologique, analyses isotopiques*

THE DISCOVERY OF THE FUR GARMENT AND ITS ARCHAEOLOGICAL CONTEXT

In the early summer of 1898, Nikolay Veselovsky, a professor from Saint Petersburg State University, Russia, excavated two megalithic tombs encased by kurgans, considered as early dolmens, near Tsarskaya (now Novosvobodnaya) in the Northwest Caucasus (fig. 1). In one of the tombs his workers found a skeleton covered with fur and textile garments decorated with silver pins; a weapon set (a bronze shafted axe, a dagger, and flint arrowheads); a tool set (an awl and chisels); a set of polished coloured balls; gold, silver and carnelian beads; a bronze caldron and several polished clay pots (IAC 1901: 33-38).

Veselovsky observed that the outer clothes consisted of "a coat made of black fur, which was worn with the fur facing outward" (IAC 1901: 37). However, no records were made about the style and cut of the fur coat or the textile clothes worn beneath it. Soon afterwards, the entire collection,

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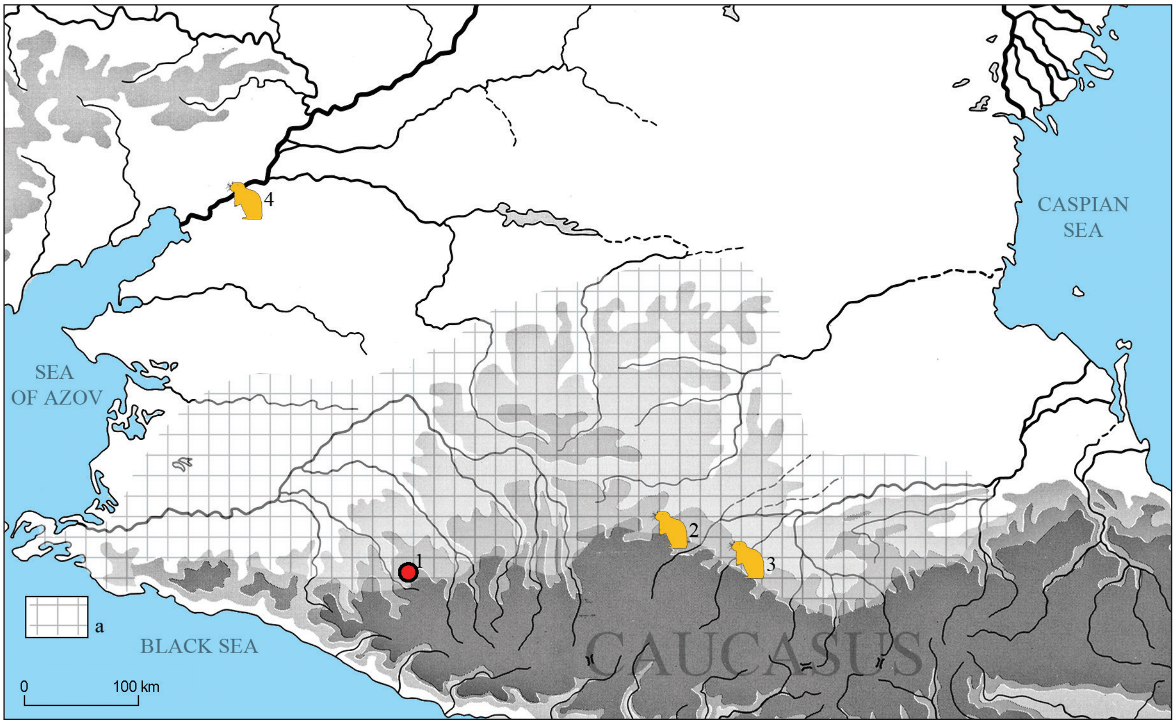

Fig. 1 – ***1.*** *Megalithic tomb (dolmen in the kurgan 2) near Tsarskaya, 1898 (modern Novosvobodnaya; map authors). The reference souslik fur samples:* ***2.*** *Kich-Malka,* ***3.*** *Orzakovsky,* ***4.*** *Aksay;* ***a.*** *Maykop culture area (Early Bronze Age).*

including the samples of fur and textiles, sealed between two panes of glass (fig. 2), was transferred to the State Historical Museum in Moscow, while publication of the finds turned the Tsarskaya dolmens into a world famous heritage site.

In archaeology, the Tsarskaya dolmens are regarded as one of the most vivid examples of the relationship between the European, Caucasian and ancient Near East cultures in the Early Bronze Age. Since the beginning of the 20th century (Tallgren 1911: 88-91; Minns 1913: 145-146; Childe 1925: 140-142), until very recently (Kohl 2007:72-86; Anthony 2007: 287-293; Sagona 2018: 281-297), their iconic images have been regularly reproduced in academic publications relating to Eurasian prehistory and the megalithic phenomenon.

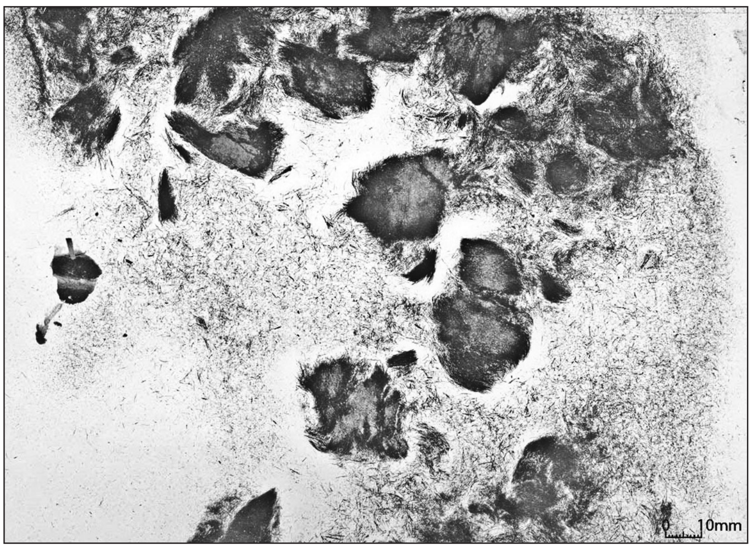

Fig. 2 – *Tsarskaya, dolmen 2, archaeological fur sample (X-sample; State Historical Museum, Moscow).*

Currently, the dolmen which contained the fur garment is attributed to the Late Maykop culture—from the northernmost periphery of the Near East civilisation, in the second half of the 4th millennium BC (Kohl and Trifonov 2014: 1577-1579).

Recently renewed excavations at the site run by the Institute for the History of Material Culture (Saint Petersburg) and The State Historical Museum (Moscow) and thorough analysis of archival materials (Trifonov and Shishlina 2014) have helped to reconstruct the overall plan and exterior of the dolmen (fig. 3) where the unique fragments of fur and textiles were found. Our study aims to identify the species of mammal from which the fur preserved in dolmen 2 belonged to, discuss the design of the earliest known fur garment in Eastern Europe and the Caucasus, and attempt to understand what lay behind this unusual choice.

MATERIALS AND METHODS

As the fur was poorly preserved, biomolecular and genetic analyses could not be applied; therefore, comparable morphological and stable isotope analyses were conducted to identify the animal species. To exclude errors in identifying the family, genus and species of the mammal (the X-sample), we also conducted comparative morphological analysis with fur samples of a wider group of fur-bearing animals, inhabiting various landscape zones within the region where Maykop culture sites are located: the reference and control group of samples. All the samples were analysed using the same methodological procedures. The final conclusion was achieved by comparing the results of the morphological and stable isotopic analyses of

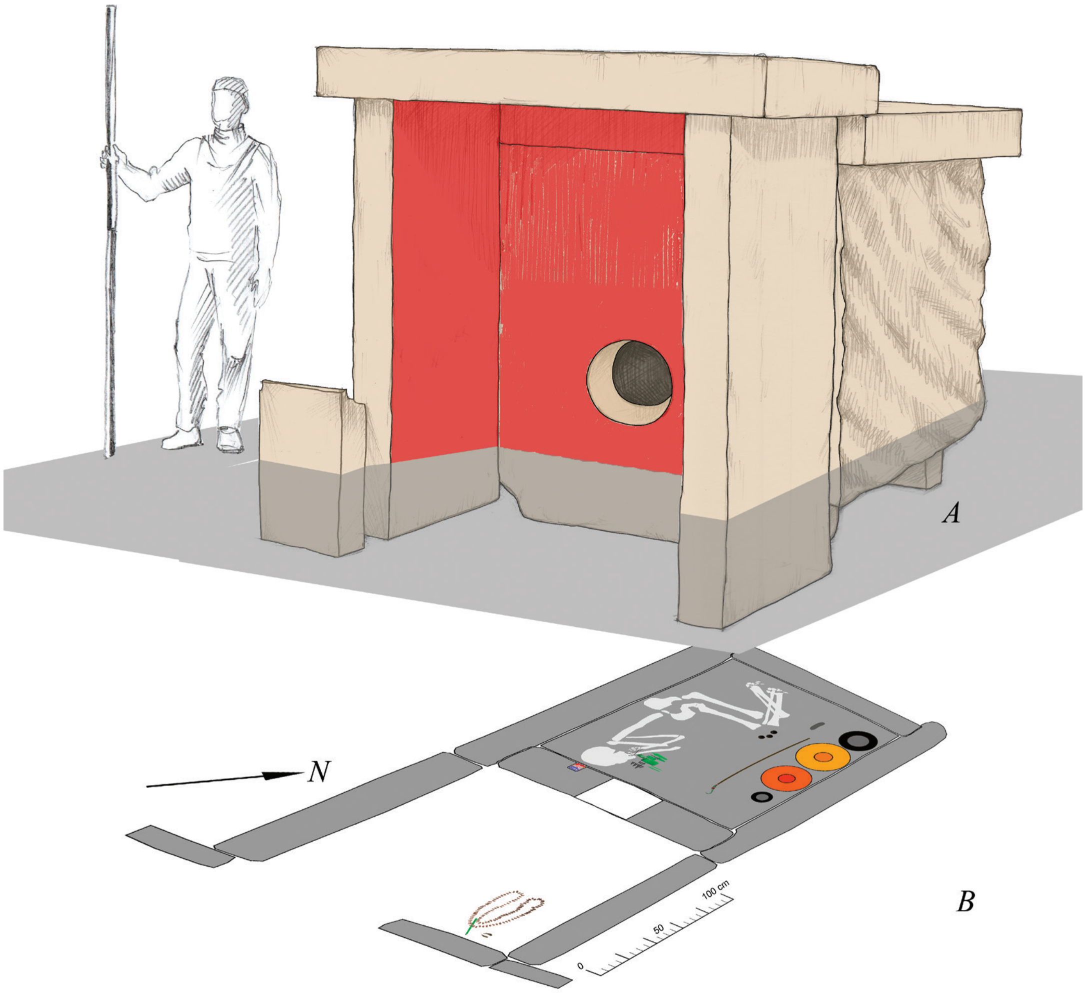

Fig. 3 – *Tsarskaya, dolmen 2, overall plan and exterior design (reconstruction; CAD authors).*

the X-sample (*i.e.*, the archaeological fur) with the data from the reference and control samples.

All the sample groups for morphological analysis were prepared and analysed under the following conditions. Hair samples were grouped by type using a binocular magnifier as well as by measuring the thickness of individual hairs using an Amplival optical microscope (VEB Carl Zeiss) and a Leica DMLS binocular microscope with a 10× eyepiece and 10×, 40×, 63× objectives fitted to a digital Leica DMLS video camera. The largest guide and guard hairs were examined with a JSM 840A scanning electron microscope and a TESCAN scanning electron microscope (SEM). Firstly, as we only had small fragments, we measured the diameter of the hairs using an optical microscope; then we measured some other hair features using SEM (*e.g.*, thickness of medulla, height of cuticular scale). Due to the fragility of the archaeological hair the samples were washed with distilled water and treated with alcohol of increasing concentrations—other detergents were deemed too severe. Longitudinal and cross sections were prepared using a sharp blade, then placed on damp colourless nail polish and quickly mounted on the microscope stage for analysis. The prepared specimens were sputter-coated with gold using an Edwards S150A Sputter Coater and examined; their images were taken at an applied accelerating voltage of 15 kV and a magnification of between 200× and 800×. Electronic graphs were made from the longitudinal sections and the cross sections of the base, and the middle parts of the hair fragments, as well as from the surface of the cuticle along the hair shaft from the base to the middle or the upper part.

Morphological parameters (hair and medulla diameters, height of cuticular scales; see *infra* table 2) for hairs used in discriminate function analysis were preliminary standardised (STATISTICA 10. StatSoft).

Measurements of the isotopic composition of carbon and nitrogen ($\delta^{13}C$, $\delta^{15}N$) in the fur samples of all groups were performed using the following technique. Before examination the samples were ultrasonically cleaned, washed twice in a chloroform and methanol blend (2:1, v/v), and then washed again in distilled water (O'Connell *et al.* 2003). The measurements were performed using a DELTA Plus XP stable isotope mass spectrometer (Thermo Fischer Scientific) connected to a Flash EA 1112 elemental analyzer (Thermo Finnigan). Standard deviations were $\delta^{13}C \pm 0.2‰$, and $\delta^{15}N \pm 0.2$-$0.3‰$. The carbon and nitrogen stable isotope ratios were measured in per mille relative to the DPDV and AIR international standards.

Geochemical measurements of the fur sample from Tsarskaya were undertaken in the laboratory of the University of Groningen, while the measurements from the reference and control samples of animal fur were made in the laboratory of the Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences.

RESULTS

MORPHOLOGICAL ANALYSIS OF THE FUR SAMPLE (THE X-SAMPLE) FROM THE DOLMEN OF KURGAN 2, TSARSKAYA, 1898

The X-sample consisted of short, dark fragile fragments of hair up to 10 mm long. The hairs were well differentiated: rare guide hairs, numerous guard hairs and downy hairs, which grow in groups, were identified. The guide hairs were straight and dark with a diameter of 66 ± 4 µm (n = 3); guard hairs of the first type (guard hairs I) had a diameter of 56 ± 3 µm (n = 6), guard hairs of the second type (guard hairs II) had a diameter of 36 ± 2 µm (n = 6); and guard hairs of the third type (guard hairs III) had a diameter of 25 ± 6 µm (n = 5). The guard hairs were also straight and dark except for the fine guard hairs III, whose shaft was slightly curly. The configuration of the guide and guard hairs substantially varied along the shaft, visible in the cross sections (fig. 4). The hair was narrow, circular and symmetrically shaped at the base; the shaft tapered slightly above the hair base in the middle part and flattened towards the widest section called granna (local thickening). A small wide groove began above the hair base (fig. 4, A: *c*, *d*, *f*; B: *d*, *e*, *h*).

The hairs had a standard three-layer microstructure composed of the outside cuticle, the intermediate layer (cortex) made of closely fitting cells, and the medulla, the hair shaft most interspersed with air pockets. Examination under light microscopy and scanning electron microscopy did not help identify the architectonic of the medulla because of its complete destruction in the guide and guard hairs, making identification of the species difficult. The cavity of the medullary column was visible (fig. 4, A: *a*, *i*; B); the medullary index, which is the maximum diameter of the medullar/maximum diameter of the hair shaft, (between 28% and 65% in hairs of different types, from guard hairs III to guard hairs I) indicated moderate development. The tile-like cuticle (with overlapping scales) was well preserved. Its pattern was different at the hair base and in the middle part of the shaft (fig. 4, A: *e*). In the lower parts, the scales of the cuticle had a single chevron pattern, with the triangular tops going up along the shaft; the pattern above the lower parts consisted of scales lying transversely, in a more or less banded manner (one scale covered the entire shaft) or a

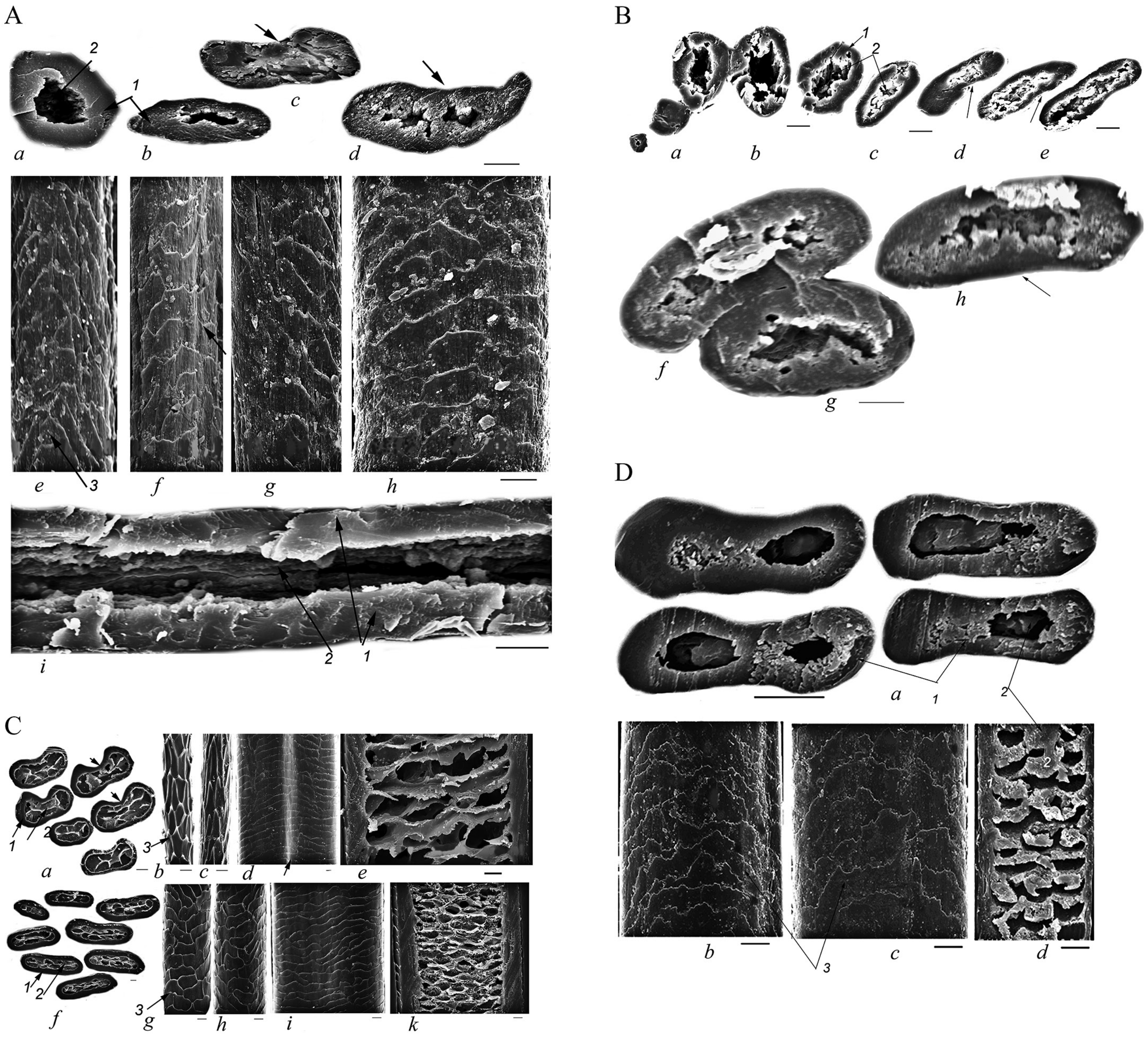

Fig. 4 – *Comparative morphological analyses of archaeological (**A-B**), control (**C**) and reference (**D**) fur samples (CAD authors).*

***A:** cross sections (**a-d**), cuticle pattern (**e-h**), longitudinal section (**i**) and the guide hair from the archaeological fur sample (X-sample): **a**, **e.** shaft base; **b**, **f.** above the base; **c**, **g.** before the granna; **d**, **h.** granna. In **c**, **d** and **f**, the small groove is marked by an arrow.*

***B:** cross sections of the guide hair from the archaeological fur sample (X-sample) from the base to the granna: **a.** first section of the shaft base; **b.** above the base; **c**, **g.** transition section between the base and the granna; **d**, **f.** first section of the granna; **e**, **h.** middle section of the granna. In **d**, **e** and **h**, the small groove is marked by an arrow.*

***C:** microstructure of the guard hair from the adult female souslik, Citellus pygmaeus brauneri (sample 2): **a.** cross sections of the shaft in the granna section; **b.** cuticle pattern in the granna section; **c.** cuticle pattern before the grana; **d.** longitudinal section of the shaft.*

***D:** cross-sections (**a**, **f**), cuticle pattern (**b-d**, **g-i**) and the longitudinal section (**e**, **j**) of the guide hairs of Sciurus vulgaris (**a-e**) and Marmota bobak (**f-j**). In **a**, the deep groove is marked by an arrow.*

***1.** cortex; **2.** hollow spaces of the medulla; **3.** cuticle scale. SEM. Scale of 10 μm.*

semi-ring cuticle. The scales reached 10 μm in height. The apical edges of the scales were broken at the hair base and smooth in the granna, possibly due to mechanical impact. The cortex layer was thick and uniform, but loose in the damaged sections (fig. 4, A: *a*, *b*, *c*, *d*, *i*; B: *f*, *g*, *h*).

The pale yellow down hairs, with a diameter not exceeding 17 μm, were non-medullated. The shafts were undulate and shaped like "waves". The diameter of the shaft was roughly two times larger on the crest of the wave (11.0 ± 0.3 μm) than in the sections between the waves (5.0 ± 0.6 μm; n = 6).

COMPARATIVE MORPHOLOGICAL ANALYSIS OF THE ARCHAEOLOGICAL AND REFERENCE FUR SAMPLES

THE FINE STRUCTURE: ARCHITECTONICS

The configuration of the thickest guide and guard hairs from the reference samples (table 1) and the X-sample were almost identical along the shaft; this was confirmed by their cross-sectional shapes visible on the electronic photographs (fig. 4, A: *a*, *b*, *c*; B; D: *a*). The hair base had a regular circular form and the shaft flattened in the middle part, reaching its maximum diameter in the granna. The ventral and dorsal sides of the shaft have a finely grooved surface, which makes the cross-section of the hair resemble a figure of eight.

The structure of the cuticle from the reference souslik hairs corresponded to that of the X-sample. At the base of the shaft the cuticle scales of the reference and the archaeological furs formed a chevron pattern made up of cuticle scales lying transversely in a banded (circular or semi-circular) manner (fig. 4, A: *d*, *i*; D: *b*, *c*). The height of all the sample scales did not exceed 10 μm, while their apical margins had traces of smoothing caused by mechanical impact.

The medullar structure of the hairs from the reference samples were of the uniserial ladder type at the hair base and the three-serial ladder type in the granna section, with well-developed keratin plates and air pockets (fig. 4, D: *d*).

It was impossible to compare the fine internal structure of the hair medulla because it was not preserved in the X-sample.

MORPHOMETRY

The diameter of the reference sample guide hairs was 67.7 ± 12 μm, largely corresponding to the diameter of the guide hairs from the X-sample (table 2). The overall shaft configuration of the guard and guide hairs from the reference samples and the archaeological sample varied equally between straight and slightly undulated.

The medullary index of the reference samples was 43-68% for guard hair type I, and up to 80% for the guide hairs. The medullary index of the X-sample guard hairs I reached 65%. These minor differences may be explained by the fragmentary state of the hairs from the dolmen sample, as the thicker sections of the hair shaft and the thickest guide hairs were probably not selected for sampling. Comparison of the main characteristics describing the structure of the reference sample guard hairs I demonstrated (table 2) that there were no statistically significant differences between them (Student's t-test demonstrates normal or close to normal distribution, K-S d and Lilliefors p), with the exception of the medullary index characteristics of the souslik 2 hairs that exceeded the mean values (table 2). However, the results of the comparative cluster analysis demonstrated that hairs from the Rostov region (Aksai) souslik were most similar to the hairs from the X-sample.

Comparative morphological analysis of the X-sample and the reference samples also confirmed that the X-sample fur was that of a souslik.

Table 1 – *Reference fur samples (authors).*

Sample	Species/subspecies	Location of catching	Date of catching	ZIN collection number
1	Little souslik *Citellus (=Spermophilus) pygmaeus*	Kabardino-Balkaria, the middle stream of the Malka River	8th May 1968	19664 74-13/17
2	Subspecies of little souslik *Citellus (=Spermophilus) pygmaeus brauneri*	Rostov region, Aksai district	22nd May 1957	3118 G3/57
3	Mountain (Caucasus) souslik *Citellus (=Spermophilus) musicus*	Terek region, Nalchik district, v. Orzakovsky	29th July 1923	13820 102-1924 (2) No. 3641

Table 2 – *Morphometry of the souslik hair reference samples (authors).*
D** is maximum diameter of the guard I shaft; **D/d** is maximum/minimum diameter of the shaft; **D/M** is the maximum diameter of the shaft/maximum diameter of the medulla; **D/C** is the maximum diameter of the shaft/maximum height of the cuticle scale; **n** is the number of measurements; **M ± m** is arithmetical mean with a mean arithmetical error; **p** is the probability factor of differences based on Student's t-test between the X-sample and the control samples. *** means differences are statistically valid.*

Characteristics	Species/subspecies			
	X-sample M ± m	Souslik 1 *Citellus pygmaeus*	Souslik 2 *C. p. brauneri*	Souslik 3 *C. musicus*
D, µm	59.2 ± 11 *n* = 4	67.7 ± 9 p = 0.28 *n* = 4	62 ± 15 p = 0.77 *n* = 4	67.7 ± 9 p = 0.28 *n* = 4
D/d, p, *n*	2.59 ± 0.72 *n* = 20	2.82 ± 0.7 p = 0.41 *n* = 20	2.4 ±0.98 p = 0.49 *n* = 10	3.6 ± 1.4 *n* = 10
D/M, p, *n*	2.34 ± 0.64 *n* = 10	2.69 ± 2.2 p = 0.63 *n* = 10	1.9 ± 0.49 p = 0.049** *n* = 20	1.8 ± 1.2 *n* = 10
D/C, p, *n*	3.7 ± 2.6 *n* = 20	3.5 ± 0.9 p = 0.86 *n* = 10	3.49 ± 1.96 p = 0.81 *n* = 13	2.9 ± 0.5 *n* = 10

COMPARATIVE MORPHOLOGY ANALYSIS OF THE ARCHAEOLOGICAL AND CONTROL GROUP OF FUR SAMPLES

The main differences between the archaeological and control group of fur (table 3) are as follows.

THE RED SQUIRREL (*SCIURUS VULGARIS*)

The architectonic of squirrel hair has distinctive features, enabling clear identification of this species and its differentiation from the X-sample. Its thick (up to 113 µm) guide and guard hairs have deep, lengthwise grooves on the ventral side (fig. 4, C*: a*, *f*), while its long, thin lower parts are covered by elongated rhomb-shaped or spinous (acuminate) scales, which are prominent and protrude from the hair shaft (fig. 4, C: *b*, *c*). The index of the lattice medulla is also overwhelmingly greater (fig. 4, C: *e*) than the medullary index of the hairs from the X-sample.

THE BOBAK MARMOT (*MARMOTA BOBAK*)

The architectonic of the bobak marmot hairs also differ from the structure of the X-sample hairs. The diameter of the guide hairs is large (up to 113 µm), they are flattened and do not have grooves (fig. 4, C: *f*), they have a latticed medullar (fig. 4, C: *k*), and the cuticle pattern varies from mosaic (fig. 4, C: *g*, *h*) to irregular (fig. 4, C: *i*).

The results of the cluster and discriminate function analyses also demonstrated differences between the basic characteristics of the X-sample and the red squirrel and bobak marmot hairs (fig. 5).

Comparative analysis has shown that the fur from the dolmen cannot be associated with small predatory mammals, such as the European mink, the ferret or other mustelids, or with big cats, such as the Eurasian lynx (*Lynx lynx*) or the panther (*Panthera pardus*) because the hairs of these species have a cone-shaped (sometimes called spinous, diamond-petal, or rhomb-shaped petal) cuticle pattern (Chernova and Tselikova 2004: 329-335; Chernova *et al.* 2011: 225).

The hairs of the badger (*Melinae)* do not have a cone-shaped cuticle; however, they differ from the X-sample hairs in that they are larger (usually more than 100 µm in the cross section) and have a ring-like cuticle pattern without chevrons (Chernova and Tselikova 2004: 336).

Hairs from horses, cattle, sheep, goats, large carnivores (*e.g.*, bears, tigers) and cervids have a well-developed medulla and, in contrast to the X-sample, do not have a flattened region in the cross-section or longitudinal grooves. Besides, their diameter is much larger than that of the X-sample hairs.

Table 3 – *Control fur samples (authors).*

Sample	Species/subspecies	Location of catching	Date of catching	ZIN collection number
1	Squirrel (*Sciurus vulgaris*)	Krasnodar region, Apsheron district, eastern slope of the Lagonaki Plateau, fir forest	June 1975	210-2002, 85680
2	Panther (*Panthera pardus*)	Kuban region	1897	3047, 106-97
3	Lynx (*Lynx lynx*)	Novgorod province, v. Babino	25th March 1911	28245
4	Marmot (*Marmota bobak*)	Lugansk region, Melovsky district, farmstead Ensachiy	29th June 1969	3527, 232-1992, 78941
5	Badger (*Meles meles*)	Republic of Adygeya, Maykop district, Klady area	September 2014	
6	Wild boar (*Sus scrofa*)	Republic of Adygeya, Maykop district, Klady area	September 2014	
7	Sheep (*Ovis aries*)	Republic of Adygeya, Maykop district, v. Novosvobodnaya	September 2014	
8	Saiga (*Saiga tatarica*)	Republic of Kalmykia, Black Lands	2000	
9	Sheep (*Ovis Aries*)	Rostov region, Remontnoye district, v. Remontnoye	2012	
10	Goat (*Carpa*)	Republic of Kalmykia, Iki-Burul district, v. Zunda-Tolga	1999	

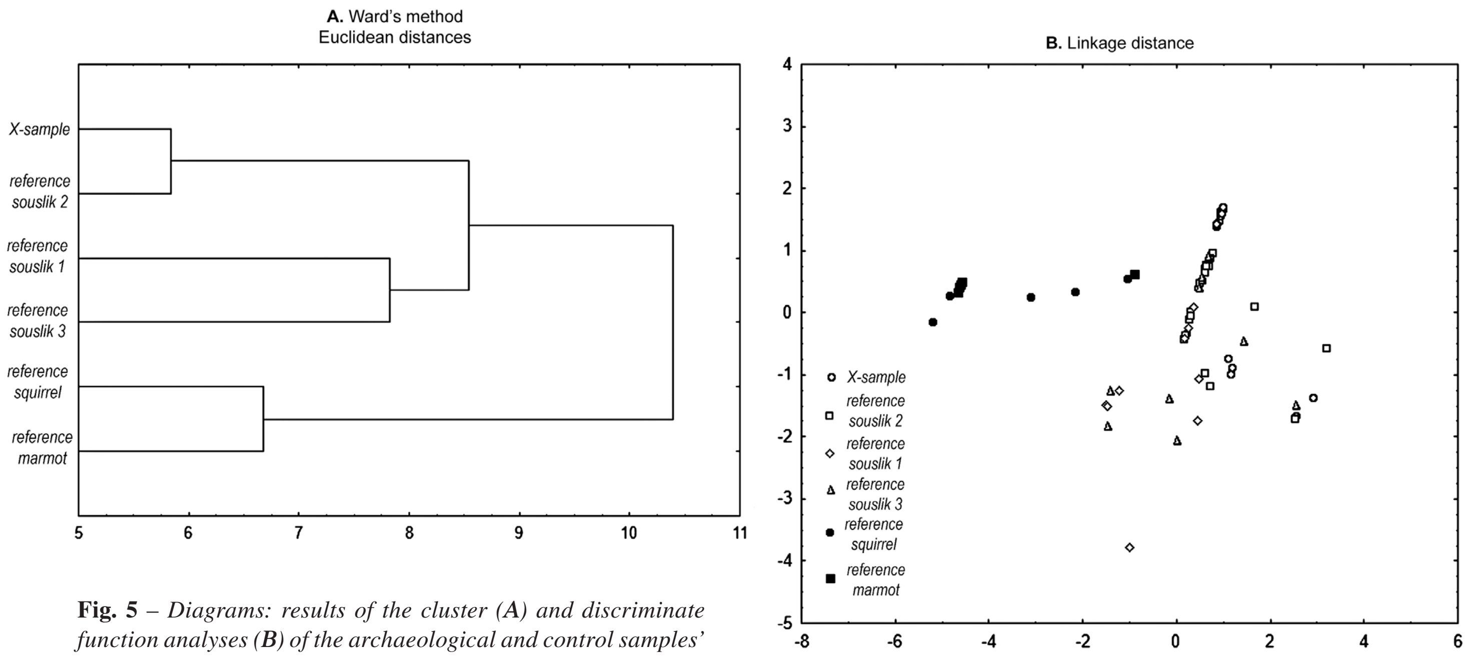

Fig. 5 – *Diagrams: results of the cluster (**A**) and discriminate function analyses (**B**) of the archaeological and control samples' guide hair's morphometric characteristics (CAD authors).*

The X-sample hairs are definitely not associated with the hare (*Lepus*) because the hair shaft of the latter has a clear dumbbell-shaped cross section due to deep grooves running along the ventral and dorsal sides. The structure of the X-sample hairs does not coincide with the hair structure of the wolf or various species of dogs as these tend to be cylindrical (Chernova and Tselikova 2004: 222-223; 297-311).

On the whole, discriminate functional analysis demonstrated a similarity between key characteristics of the X-sample and the reference souslik group of samples.

This analysis also pointed to the souslik; the probability that the hairs from the X-sample are associated with the fur of mustelids and felines, which are expensive and prestigious from a contemporary point of view, can be excluded.

Comparative analysis of the morphometric features and data on the structure of the fur hair from the X-sample suggests that it belonged to the fur of a small rodent, most likely the souslik, confirmed by the form of the hair shaft, the cuticle pattern and the medulla structure.

ISOTOPE ANALYSES

In determining the isotopic composition of the animal fur from dolmen 2 (the X-sample), it was assumed that its nitrogen and carbon ratios must be roughly the same as that of the souslik fur from the reference samples because the stable carbon and nitrogen isotope ratios depend on animal diet and habitat selection (Ambrose and DeNiro 1986). The carbon isotopic composition of the animal tissue, including the hair, is dependent on the amount of consumed plants with various types of photosynthesis (C_3/C_4; O'Leary 1988), while the nitrogen isotopic composition is dependent on the trophic level to which the animal refers (Adams and Sterner 2000). Hence, the carbon and nitrogen isotopic composition may characterize the likely habitat of the animal, its place in the trophic chain and its species.

Sousliks are typical inhabitants of the steppe, forest-steppe and grassland-steppe open landscapes. They are polytrophic. Their basic diet consists of green vegetation and food of animal origin, mainly insects. Sousliks eat the green parts of plants, the seeds of wild gramineous plants, roots and tubers. The plant-to-animal food ratio varies depending on their biotopical distribution.

Sousliks are a background species and a major link in the biocenosis trophic chains in their habitats. They impact plant communities but are prey items for birds, snakes and other predatory animals (Gromov *et al.* 1965). Generally speaking, the souslik's diet is rather distinctive, and among the *Sciuridae* inhabiting the steppe and piedmont areas of the north Caucasus, it is only the marmot that has a similar diet. Hence, the isotopic signatures of the souslik and the marmot will be different from the isotopic signatures of other animals that have a similar fur cover but a different diet system.

To verify the results of the comparative morphological analysis, we carried out comparative analysis of the carbon and nitrogen isotopic composition of the reference and control samples. The data confirmed the results of the morphological analysis, indicating that the X-sample corresponds to the fur of the souslik (fig. 6).

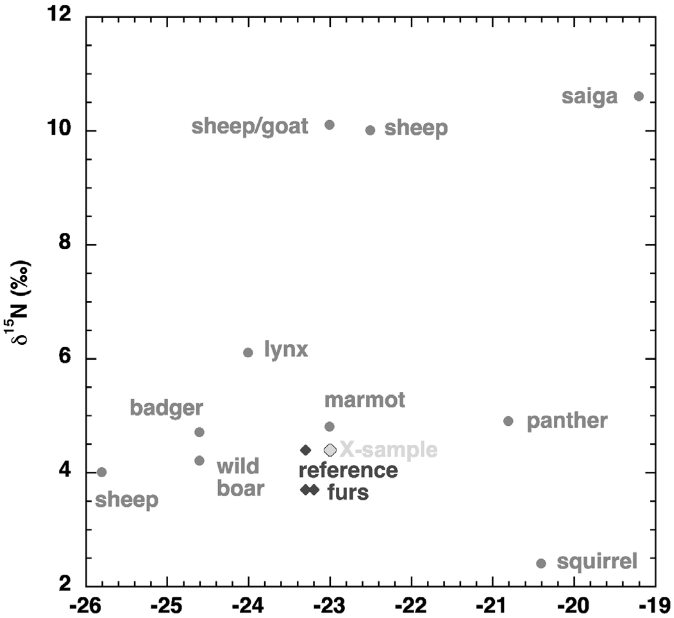

Fig. 6 – *Stable isotope ratios $\delta^{13}C$ and $\delta^{15}N$ for the archaeological fur sample (X-sample), the reference souslik fur samples and the control group of fur sample (CAD authors).*

The fur sample was directly dated to *ca.* 3300-3000 BC (4445 ± 35 BP); this dating complemented the dates obtained from the textiles, and the human and animal bone samples from dolmen 2 (Shishlina 2008; Trifonov *et al.* 2017).

INTERPRETATION AND CONCLUSION

At the end of the 4th millennium BC, during the Maykop culture period, the area around the site was forest steppe (Kalinin *et al.* 2017), making sousliks, as small game, easy to catch. However, given the apparent high-status of the buried individual and the availability of high-quality furs in the Caucasus foothills, the use of the souslik fur appears an unusual choice.

The fur remains covered the body of the deceased from neck to feet, and given that the average size of a souslik skin is 3-4 dm², approximately 25-30 skins were needed to make the funerary garment (Marsakova *et al.* 1991: 49-53). It seems that the fur was not dyed, because the down hairs have retained their natural yellowish tint. In other words, the souslik fur was not altered in order to appear similar to mink or squirrel, as contemporary furriers sometimes do (Goncharova 2012: 248). As the flesh side of the souslik fur is thin and fragile modern furriers often glue the souslik fur to a piece of cloth, but we cannot ascertain that this was the case here. The fur was seemingly unattached to the cloth beneath, which had been made of wollen and cotton threads. The bottom layer of the cloth was sprinkled with cinnabar (Shishlina *et al.* 2003).

The entire outfit appears to have consisted of a striped woollen garment adorned with tassels and a souslik fur coat, which finds a clear analogy in the clothes worn by an anthropomorphic figure depicted on the wall of another dolmen in the same cemetery (fig. 7; Rezepkin 2012: 182-183, fig. 53 and 54, 1; 330-332).

Highlighting the wearers noble status, the accessories of the fur outfit included two curved (crook-shaped) silver pins, found near the chest of the deceased (fig. 8 and 9). These pins were possibly used to fasten the garment in the same way that similar pins were used in the Near East in the 3rd millennium BC (Klein 1992: taf. 192-193; Aruz and Wallenfels 2003: 161, fig. 104a).

Hence, it may be argued that the burial outfit of the Early Bronze Age nobleman from the North Caucasus consisted of a souslik fur coat and textile garments, which combined local elements with Near Eastern *haute couture* style accessories. The choice of souslik fur for the grave clothes of this Early Bronze Age nobleman were clearly symbolic; however, their intended meaning remains unclear.

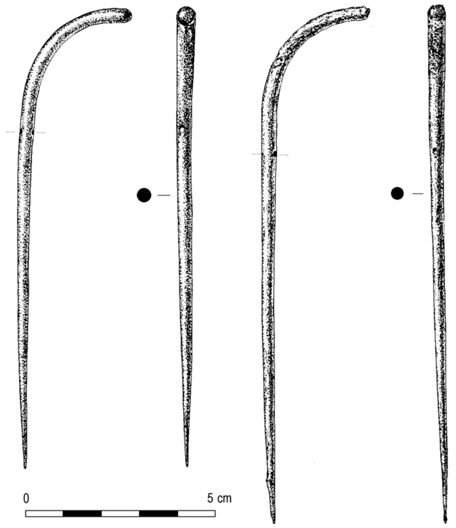

Fig. 8 – *Tsarskaya, kurgan 2: silver pins (CAD authors).*

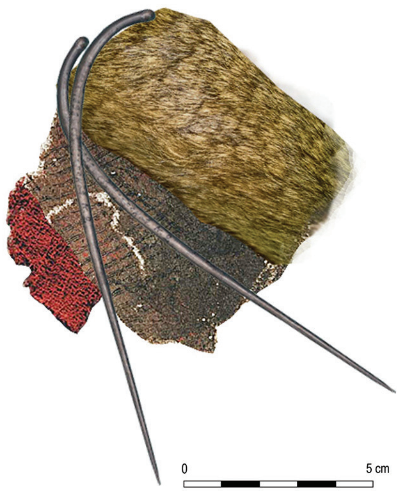

Fig. 9 – *Silver pins and pieces a woollen cloth stitched with cotton thread (both original; the bottom layer is sprinkled with cinnabar) and embellished with souslik fur (reconstruction by the authors).*

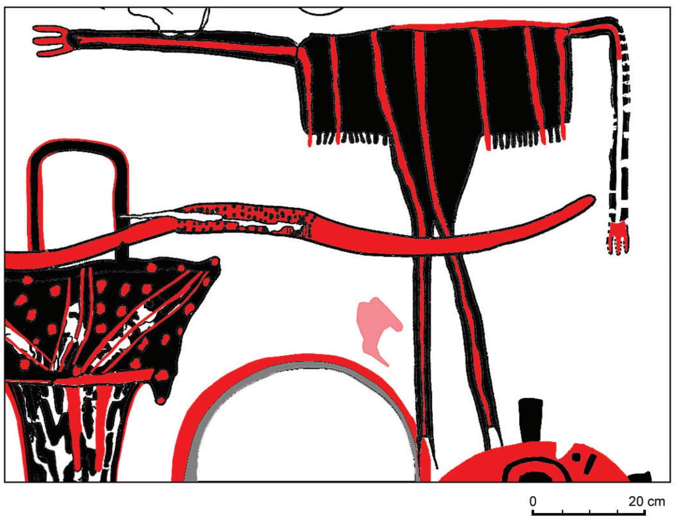

Fig. 7 – *Dolmen 28, Klady cemetery. The image of an anthropomorphic figure dressed in a mantle (after Rezepkin 2012; modification by the authors).*

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