



1 Yomut Turkmen all-pile tent band, *ak yüp* (detail), 2nd half 17th century. Radiocarbon dated and tested for insect dyestuffs and mordants. This virtuoso weaving combines designs with ancient roots in the Near East with the Safavid/Mughal-inspired flower design of the same period as its manufacture in a workshop in southwestern Turkmenistan in the 17th century. 0.28 × 13.82 m (11" × 45' 4"). Private collection

2 Salor Turkmen torba fragment with *ak su* design, 17th or 18th century. Tested for insect dyes. Both the structure and way insect dyestuffs are used in the design indicate a clear Salor attribution. Asymmetrically knotted open left, 0.86 × 0.46 m (1' 6" × 2' 10"). Private collection, formerly Munkacsi/Jeffries collection

New perspectives

Sixteen years in the making, Jürg Rageth's limited-edition *Turkmen Carpets, A New Perspective* is a monumental work of dedicated research. Editor of the English text **Dewitt Mallary** throws light on how Rageth, better known as an expert on Anatolian kilims, has approached the field with fresh eyes



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In 1997 Jürg Rageth organised a symposium in Liestal, Switzerland presenting his findings on the radiocarbon dating of Anatolian kilims. At that symposium, leading Turkmen carpet collectors Hans Christian Sienknecht and Peter Hoffmeister asked whether he could coordinate an experiment of radiocarbon dating some antique Turkmen carpets from their collections. The first group of Turkmen pieces was sampled and tested in May of that year by Georges Bonani at the ETH in Zurich. The results seemed promising and intriguing enough that the decision was made to proceed with testing a second group of pieces from those two collections. After that, Elena Tsareva orchestrated the sampling and testing of a third series from three St Petersburg museums: the Hermitage, the Russian Ethnographic Museum and the Russian Museum. So began the project that was to consume almost two decades of Rageth's life, and that has culminated in the publication of his two-volume opus *Turkmen Carpets, A New Perspective*. He organised an exhibition and symposium in 1999 to present the results of the initial series of tests, after which it was agreed that the project should be expanded and the results published. With a grant from the Lotteryfond of the Kanton Basel-Landschaft, Switzerland, and the support of



3 Salor Turkmen chival fragment, 17th or 18th century. Radiocarbon dated and tested for insect dyestuffs and mordants. This outstandingly beautiful fragment exemplifies the strict Salor adherence to the use of designs with ancient roots. Asymmetrically knotted open right, 0.44 x 0.76 m (1' 5¼" x 2' 2"). Private collection

American collector George Hecksher, who also submitted pieces from his collection for testing and encouraged other American collectors to participate, the number of tested pieces continued to grow.

As the number of tested pieces with early results increased, Rageth's interest was piqued by an unusual bright red colour disproportionately encountered in weavings with test results indicating or potentially indicating unusual age. Tests to determine the source and nature of the red dyes commenced. Harald Böhmer conducted the first tests using thin-layer chromatography (TLC). This method eventually proved unable to determine

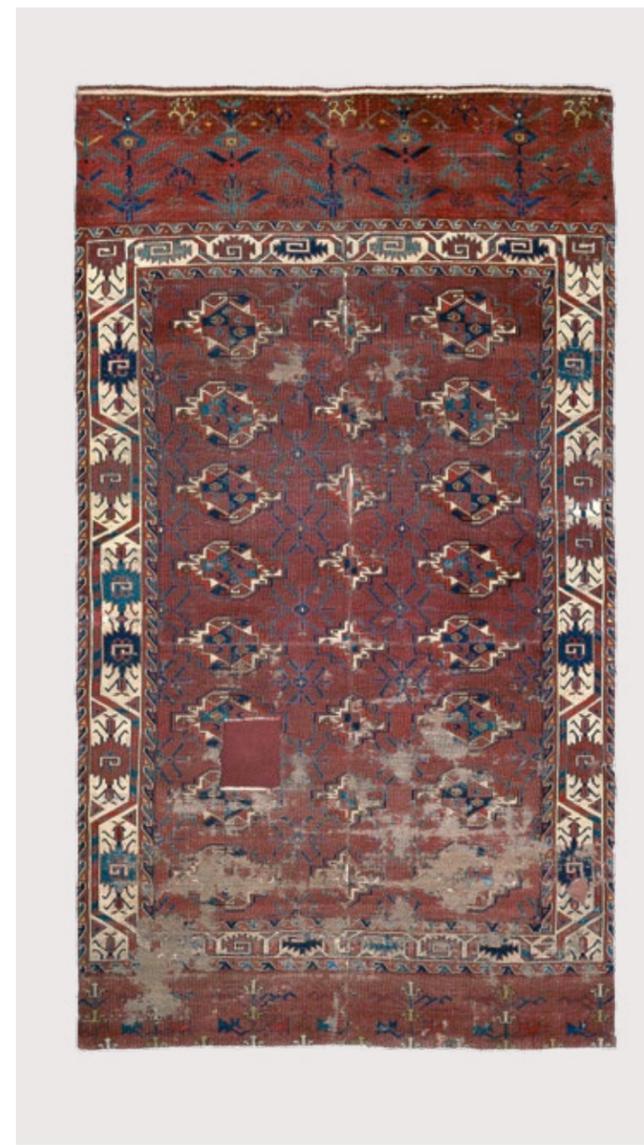
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the difference between different types of cochineal. On hearing about the work of Jan Wouters and André Verhecken identifying insect dyes using HPLC analysis (high performance liquid chromatography), Rageth went to Brussels and met Wouters in 2002. From that meeting evolved a four-year project to test 230 wool and silk samples for red dyestuff and in 60 cases also for mordants.

As the tests continued and as he selected and arranged photography of pieces for the catalogue, Rageth's immersion in the details of Turkmen carpets stimulated his interest in some of the open questions and some of the 'prevailing wisdom' about the sources and evolution of their designs. Over the same period, his knowledge of the history of Central Asia increased. Concurrently, new historical and art-historical data appeared, as did more and more apparent connections between the designs of Turkmen carpets and the art of the ancient Near East.

Turkmen Carpets, A New Perspective is the ultimate result of a 20-year pursuit of these three strands of enquiry: radiocarbon dating, dye and mordant analysis, and historical/art-historical investigation. Though the new scientific data adds to our factual information about individual objects, it is really the combination and cross-referencing of the various data points that Rageth feels gives us a new perspective in our understanding of Central Asian carpet weaving. His project does not attempt to be comprehensive, nor cover every type of Turkmen weaving or every aspect of their attribution or design history. Pieces have been selected primarily on three criteria: age, dyes and whether they illustrate an aspect of the history of design.

Volume 1 includes the catalogue of 128 pieces illustrated in colour on full pages with full technical analyses, 40 additional pieces for which only black and white images



4 Karadashli Turkmen main carpet fragment, first half 17th century. Radiocarbon dated and tested for dyestuffs. One of the very few Turkmen *hali* featuring large flowers in the elem. The presence of that particular style of flower, presumably adopted from Safavid or Mughal models, suggests limiting the early carbon dating result range to the first half of the 17th century. 1.42 x 2.47 m (4' 8" x 8' 1¼"). Private collection

5 Yomut Turkmen main carpet, *kepse göl* design. 18th century. Radiocarbon dated. An early and powerfully drawn example of the 'classic' *kepse-göl* design which, arranged in diagonal rows by colour, became one of the most standard compositions of 19th-century Yomut *hali*. 1.45 x 2.36 m (4' 11" x 7' 9"). Private collection, formerly Munkacsi/Jeffries collection



could be found, full appendices with detailed results of the radiocarbon testing, dye and mordant analyses, and articles about the actual scientific tests and their interpretation and application.

Volume 2 starts with some general comments about the history and weaving of each tribal group represented in the plates in Volume 1, followed by detailed discussions of the individual pieces in the catalogue, oriented in particular to unusual data points of dating and/or dye/mordant analysis and/or design features. The final section of volume 2 is a set of chapters exploring the sources, history, and evolution of certain designs, some quite specific and rare, and some with many variations among pieces from diverse groups of weavers from a variety of time periods. While some are clearly rooted in the design breakthroughs at the Safavid and Mughal courts of the 16th/17th centuries, many clearly have ancient roots in the Near East pre-dating by millennia the arrival of the Turkic people who became the Turkmen tribes we know from relatively recent centuries.



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6 Arabachi Turkmen main carpet, *chival gül* design, 17th century. Radiocarbon dated and tested for insect dyestuffs and mordants. Though without doubt a remarkable early survival, this *hali* manifests 'provincial' design traits likely consistent with its production a good distance to the north of the workshops of southwestern Turkmenistan. 1.86 x 2.86 m (6' 1¼" x 9' 4½"). Private collection

7 Tekke Turkmen *ensi*, 18th century. Arguably the most beautiful and clearly drawn of the surprisingly small group of Tekke *ensi* (tent door rugs) with the 'candelabra' border, this piece is also a virtual catalogue of designs with apparent roots in the ancient Near East. 1.14 x 1.56 m (3' 9" x 5' 1½"). Private collection

An Arabachi main carpet with a design of *chival guls* and variant *chemche guls* illustrates various insights gleaned from different types of scientific data combined with historical information (6). The designs and pattern of the field composition by themselves qualify this piece as highly unusual; the *chival gül* is rare in Arabachi main carpets, and the use of the major and minor designs in the composition of the field — three columns of *chival guls* and four columns of complete *chemche guls* not cut off by the borders — is not known in any other extant piece. It exhibits a typical Arabachi

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construction with asymmetric knots open to the left and wefts of what appears to be camel hair plied with cotton.

The absence of comparable examples becomes somewhat less surprising given the radiocarbon dating result, including two date ranges, the earlier starting at 1492 and the later ending at 1657. This piece, therefore, is one of fewer than two-dozen that have so far returned unequivocally early carbon datings. The drawing of the *chival gül* is somewhat simplified compared to the more 'refined' versions of the Salor or even the Yomut; some might have attributed this, as well as the unusual interpretation of the 'curled-leaf' border, to design degeneration indicating a more recent date, but the scientific evidence requires a different explanation. Rageth attributes the 'rustic reframing' of the designs to the provincial geographic origin of the piece, 'simplifications... characteristic... of products from the periphery (Mangishlaq and Ust-Yurt)'.

Carbon dating alone establishes that this is an exceptionally early example for a Turkmen carpet, but it still leaves a relatively wide 165-year time window. Present in a very small amount in the rug, however, in only one of the *hochak* crosses in the *chival gül* centres, is an unusual bright light red. Test results indicate that the dyestuff employed is Mexican cochineal, which eliminates the first 60 years or so of the date range indicated by carbon dating, since the Spanish did not conquer Mexico and set up substantial export of Mexican cochineal until well into the 16th century. Further testing of that same colour indicates the use of tin mordant, which, as is explained in detail in the book, further limits the realistic time frame to the 17th century end of the range. This is just one example where a combination of a number of scientific data points adds to our knowledge, in this instance fairly specifically, as well as creates a context for a better understanding of the relationships and development(s) of designs.

The other essential aspect of Rageth's 'new perspective' is his in-depth examination of several specific designs such as the



8 Yomut Turkmen main carpet, multiple *göl* design, mid-15th to mid-17th century. Radiocarbon dated and tested for dyestuffs. One of only three known Yomut *hali* with three distinct 'major' *göls* rather than the more standard major and minor *gül* concept. 1.76 x 3.20 m (5' 9¼" x 10' 6"). Private collection



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9 Chodor Turkmen trapping, *ertmen gül* design, 18th or early 19th century. Radiocarbon dated. This unusually beautifully coloured piece is one of only eight known trappings in this large format with the *ertmen gül*, which arguably harks back to Sasanian/Sogdian textile designs. 1.80 x 0.66 m (5' 11" x 2' 4"). Fine Arts Museum of San Francisco, 2000.186.11, Gift of George and Marie Hecksher, formerly Wher collection, Lugano

10 Tekke Turkmen all-pile *kizyl chuval*, nine-stripe pattern with 'cross and star' design, first half 19th century. All-pile banded *chuvalls* are much rarer than the mixed technique examples; only seven are published. Though they have been variously attributed, it seems most likely that they are Tekke products. 1.12 x 0.81 m (3' 8" x 2' 8"). Private collection

ak su motif, discussed overleaf (2, 15), and his attempt to look at them in the context of source materials starting in the ancient Near East. Over the last few decades, art-historical theory, supported by an increasing amount of new information including cuneiform written documents and knotted textiles from the 14th century BCE, has coalesced in support of the notion of an ancient Near Eastern origin for carpet weaving, perhaps significantly further back in time than might have been the prevailing wisdom a century ago. The resilience and endurance of important symbols is remarkable; it is possible to find examples even today, in some isolated circumstances, of surviving practices about which there is some awareness of ancient roots as well as common everyday uses of no-longer-understood symbols and parlances in industrial societies.

It should not be surprising, then, that symbols retained their meanings and/or at least significant vestiges of what they were intended to convey, in predominantly pre-literate cultures, certainly up to and including the period of production of the extant antique Turkmen carpets and trappings. Rageth traces developments and relatives of a number of designs back, some to the ancient Near East, and some to more recent developments, primarily in the Iranian cultural sphere. In at least one instance, he shows variations of the same design from different periods that can both be found in extant Turkmen carpets.

While *Turkmen Carpets, A New Perspective* does not attempt to be all things to all collectors, it includes a great deal of new factual scientific data and examples of how different streams of scientific data can be combined with historical information to add to our understanding. Further, by demonstrating the indigenous Near Eastern roots of many Turkmen carpet designs, it not only clarifies some of the long-troubling issues of the meanings and sources of those designs, but also creates a new context and direction for future examination and research.

The Turkmen *ak su* design

One design Rageth looks at in detail is the *ak su* motif, found exclusively on small old pieces of the 'Eagle-göl' groups, the Salor (2), the Saryk, the Tekke, and the Ersari, until the latter half of the 19th century, when it is used by other groups on other types of pieces. In this examination, as with others, he looks not only at textiles, but at a wide variety of media including architectural design and decoration, painted pots, bronze, silver, and gold vessels, and paintings. In a number of instances, as here, there are intriguing etymological connections as well. *Ak su* means white water (fresh water - water necessary for life), and the design without any question comes from a direct line of depictions of watercourses in gardens and landscapes.

The earliest examples to show watercourses laid out in a lattice of 'cambered volutes' very similar to the *ak su* design are bronze belts from Urartu, dated to the 7th century BCE (11). One Urartian belt also shows other features that crop up in later Turkmen weavings. That this is not an isolated case seen only in Urartu is clear in a gold-foil belt from the Ziyiye hoard, dated to the 6th century BCE, with elements both from Urartu and from the Scythian animal style (12).

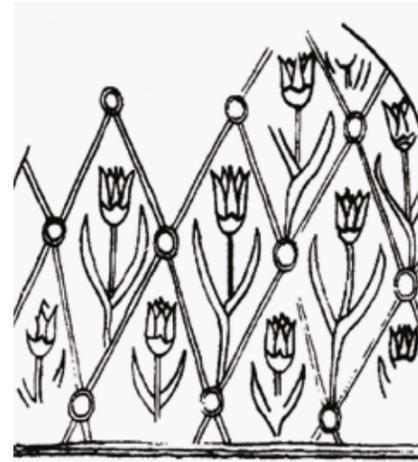
Intermediate examples of the survival of the concept of a lattice of watercourses with floral or animal decoration are a 5th-century Sogdian wall painting (16), a 5th/6th-century Sasanian textile (17) and a 7th-century Sasanian stucco (18). A different example of survival of the form in rugs contemporary to extant Turkmen rugs is shown in a Mughal silk carpet (19). More geometricised versions of the design, appearing to have even closer relationships to the Urartian and Scythian versions (11, 12) and to the Turkmen version (15) are seen in two pieces from the 7th-9th century found in Egypt, a silk samite (13) and a woollen textile (14), both of which originally had red grounds, though the silk has now faded to beige. The survival of the design into extant Turkmen carpets, even into the early 20th century, is likely in good part because of its geometricised form, which makes it easier to learn and reproduce from memory.

An essential point of the discussion of the *ak su* design is that the survival of a concept and even a closely similar version of a specific design over two millennia or more is not an isolated or unique occurrence. In fact, there are already quite a few recognised instances of this occurring, and more undoubtedly will come to light. Rageth not only details a number of these cases in regard to designs that occur in Turkmen carpets into the 19th century, but also discusses examples from other media of designs that have survived.

Furthermore, it seems clear that designs with particular symbolic significance often outlived the understanding of their meaning, while still being used in the same manner as when they were understood. The *ak su* design, in fact, may have remained in closer relationship with its original meaning than other designs; water was understood as essential to existence for many millennia BCE and still is, whereas some of the symbols of protection and power that were tied to cultural practices and religious beliefs that have changed over the millennia have become separated from their meanings. ❖



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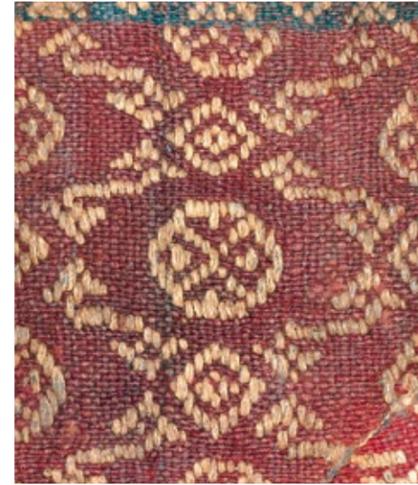
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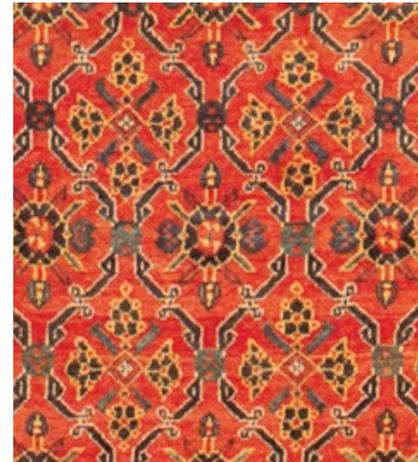
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11 Hunting scene in a garden crossed by watercourses. Detail from a fragment of a Urartian bronze belt, 7th century BCE. 'Cambered brackets' (volute) form the lattice that represents watercourses

12 The *ak su* design in Scythian animal style. Detail from a golden belt fitting, 6th century BCE. The detail highlighted shows volutes forming the 'watercourse' lattice

13 Silk samite with the *ak su* design. Detail from a fragment found in Egypt, 7th-9th century. Metropolitan Museum of Art, New York. After Evans & Ratliff, *Byzantium and Islam: Age of Transition, 7th - 9th Century*, New York 2012, p.150, no.99B

14 Woollen textile fragment, Egypt, 7th-9th century. The pattern, a white design on a red ground and a blue ground border, not only resembles the Turkmen *ak su* design (15) but also the Scythian lattice of the metal belt (12). Katoen Natie Collection, Antwerp, 772-04

15 Detail from a Salor *torba* (2), 17th-18th century. The Turkmen *ak su* design shows amazing parallels to the lattice of the Urartian and Scythian metal belts in (11, 12) and to the textile designs in (13, 14)

16 Sogdian wall painting representing a garden with a lattice of streams and tulips. Jar-Tepe, 5th century. Although the representation is already heavily stylised,

it still clearly shows the basic schema of a lattice of watercourses and flowers. After Sims, *Peerless Images, Persian Painting and its Sources*, New Haven & London 2002, p.15

17 Design of a Sasanian silk found in Antinoë, Egypt, 5th-6th century. The whole represents a garden with streams, analogous to that on the Urartian metal belt (11). After Musée Cernuschi, *Les Perses Sassanides, Fastes d'un empire oublié (224 - 642)*, Paris 2006, p.163, cat.103, drawing by S. Forestier

18 Sasanian stucco wall panel, Nizamabad, 7th century. After Kröger, *Sasanidischer Stuckdecor*, Baghdader Forschungen, vol. 5, Mainz 1982, fig.93

19 Detail from a North Indian pashmina carpet fragment showing a white lattice with flowers on a red ground. Mughal period, 2nd quarter 17th century. See HALI 186, 2015, p.61. Courtesy Moshe Tabibnia, Milan

20 Detail from an Ersari Turkmen carpet, Bukhara Emirate, 19th century. The grid shows parallels not only to the grid of the Urartian metal belt in (11) and the floral-figural form of the *ak su* design (16-19), but also to the abstract-geometric form (12-14). After Herrmann, *Seltene Orientteppiche IV*, 1982, no.95