

Tibetan bound books from the Drangsong Collection in Upper Mustang, Nepal

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Abstract: This article discusses a little-known Tibetan bound-book format, using examples from a unique collection of manuscripts, named Drangsong, belonging to the Bon religion of Tibet. Despite the fact that Tibetan sewn books are rare compared to other formats, they are common in Mustang. This study of sixteen sewn Drangsong manuscripts explores the technical details of their binding, the interdependence of the format and function of these manuscripts, as well as their manufacturing materials in the context of the provenance of these books and the social history of the region. A comparison will then be made between the books' individual vs. collective features.

Keywords: Tibet, Mustang, Nepal, Drangsong Collection, Tibetan bookbinding, codicology, material analyses

Introduction to bound books of Tibet

Tibetan books are usually known as loose-leaved collections wrapped tightly in a cloth between wooden boards, and then neatly placed on the usually red-and-gold painted wooden shelving structure, where, ideally, every volume has its own designated pigeon-hole in a specific order within the collection (Figs 1a and b).¹ This most commonly used format, the *pecha* (*dpe cha*), was named after the Indian loose-leaf format found in palm-leaf manuscripts usually known in modern Indian languages as *pothi* (Skt. *pustaka*),

¹ For general information on Tibetan books, see Grönbold (1982, 1991); Schaeffer (2009); Helman-Ważny (2014, 2019).

but more often *poti* in Tibetan.² Beyond the *poti* or *pecha*, Tibetan books and documents are also found in the form of scroll, concertina, and sewn book (*tshems pa*, *ltebs ma* or *deb ther*). These formats vary in size, the technologies used for their production, the specific functions of the manuscripts, and the ways in which they would have been used. This has also been influenced by the long period of time over which they were produced and the wide geographical area over which Tibetan culture held sway.



Fig. 1: The wrapped and tied *poti* volume of loose leaves from Lubrak village in Mustang, Nepal, on the left, and the numerous carefully wrapped *poti*-s placed at the private home altar in Ghami village in Mustang, Nepal on the right. Photographs by Agnieszka Helman-Ważny (2015 and 2017).

All formats have their particularities, which can be seen as advantages or disadvantages depending on one's perspective. For example, as a result of the loose-leaf format, both folios and coverboards are often misplaced, as a consequence of which many Tibetan books, in both traditional and Western collections, are incomplete or disordered. The loose-leaf construction of books also meant that, if not well protected by their wrappings and covers, they were particularly vulnerable to damage due to mishandling or to external factors, such as sunlight, water, smoke, and pests. Optimally, the wrapping cloth (*dpe ras*) protects the leaves from the external environment and minimises the risk of damage or loss. The disadvantages of the loose-leaf format probably prompted Tibetan book-producers to consider other formats for specific uses, especially those in which folios were bound together.

Indeed, long before the emergence of the modern book format adapted from the West around the middle of the twentieth century Tibet had its own form of the codex, named *deb ther* (Stoddard 2010: 363–379; Helman-Ważny 2014: 63). Although this format was neg-

² For the Indian *pustaka* and *pothi* see Baums (2021: 343–62); Ciotti (2023: 155–89). For the Tibetan *poti* format see Helman-Ważny (2023); Dotson and Helman-Ważny (2024).

ligible compared to the number of loose-leaf books produced, there are a few examples of Tibetan bound books dated to as early as the ninth century.³ Later, probably from the period of Mongol dominance in Tibet in the thirteenth and fourteenth centuries, Tibetans used the Mongolian loan word *debter* (*deb ther*, from the Persian *daftar*) to refer to the codex (originally from the Greek *diphthera*, ‘leather’). The same term also came to be used to refer to a genre of historical writing (literally ‘annals’), presumably referring to the stitched copybooks in which records would sometimes be kept (Dotson and Helman-Ważny 2024).

The Tibetan *deb ther* would sometimes be sewn at the side, but it is most often sewn along the top margin (hence the name *mgo tshems pa*, ‘head-sewn’), so that its pages would be turned vertically as in a *pecha*. Since the manuscripts in question are usually folded (Tib. *lteb ma*) and stitched (Tib. *tshems pa*) along a horizontal axis at the ‘head’ (*mgo*), they are usually referred to as *mgo tshems pa* or *mgo lteb ma*. They are also commonly referred to as *deb ther* (from Greek *diphthera* then Persian *daftar*), literally ‘annals’, since this physical form was often, though by no means always, used for the genre.

The Tibetan terms *mgo tshems* or *mgo lteb ma*—discussed above—were used by David Jackson in the *Mollas of Mustang* with attribution to Tashi Tsering.⁴ In the same book he also stated that such types of books were common in Mustang (Jackson 1984: 34 n.26). Remarkably, this format often has a loop in the middle of the spine that allowed for such books to be carried by being strapped to a monk’s robes; sometimes, the loose thread was tied around the book as was the strip of textile attached to *dpe ras* in the *poti* books.

The structure of Tibetan bound books, considering the number and location of stitches, as well as the type and number of gatherings,⁵ would be significantly different from the sewn and stitched binding patterns in other common bound formats. Sheets would often be folded into bi-folios and stitched at their gatherings. The most common arrangement of the book would have between one and six gatherings sewn at the top in three sewing-stations (Fig. 2).

There is no particular size associated with this format, but it often resembles the proportions characteristic of a folded concertina or narrow *poti* leaf folded in half. They would often be fairly small and therefore portable. Nor is there a clear pattern with respect to the number of bi-folios enclosed in each gathering, although these gatherings would typ-

³ There are a couple of Dunhuang sewn manuscripts such as IOL Tib J 401 and IOL Tib J 530 preserved in the British Library collection (see Helman-Ważny 2014: 63–65). One of them, ‘A Tibetan Book of Spells’ archived as IOL Tib J 401, in the form of a Tibetan booklet containing offering methods for divination, rainmaking and curing various medical ailments has recently been discussed in detail by Sam van Schaik in the *Bon and Naxi manuscripts* volume (van Schaik 2023: 15–33). Later dated bound books in the British Library collection are archived as OR 15193, CC 114–115, BL 14727 1–2, CC 101. For a detailed description see Helman-Ważny (2014: 65–75).

⁴ Jackson (1984: 26). I would like to thank Charles Ramble for bringing these names used in Mustang to my attention.

⁵ A gathering (or section), a technical term in bookbinding, is a group of sheets folded in half (bi-folios), to be incorporated (sewn) into the binding as a unit.



Fig. 2: 3D model of the common construction of Tibetan sewn books with three gatherings sewn at the top in three sewing-stations. Drawing by Olga Ważny (2022).

ically contain significantly more folios than the gatherings in codices of other practices. The sewn volumes with elongated leaves of about 8cm×25cm, bound along the short edge at the fold to the left, as for example OR 15193 in the British Library collection, were much used for works on practical topics that required frequent consultation, such as almanacs and medical handbooks.

Regardless of whether a volume is sewn at the left or at the top, one typical feature of this binding style is that every gathering has its own band supported with silk, cloth or another material, unlike typical Western bookbinding, in which a band is usually applied to an entire book rather than separately to each gathering. This feature is common to almost every *deb ther* book and is typical for Tibetan sewn bindings. It may be exemplified by the Tibetan Bon manuscript from Jharkot in Mustang, with a supporting textile band at each gathering of the binding (Fig. 3), or the *thigshok* manuscript from Bhutan held by the British Library (MS 13162).⁶

Sewn booklets, like other formats, display variety with respect to their page outline. They tend to lack pagination, possibly due to the fact that bound book-leaves are supposed to stay in order *per se*. Some have inked or nicked guidelines and margins or full frames, while others do not. Format and genre are not always correlated, but Tibetan bound books would often be used for ritual, legal and medical purposes, as well as for manuals of divination and almanacs.

⁶ The *thigshok* manuscript MS 13162 is a sewn book consisting of forty-two leaves measuring 18.5cm×7.5cm×2cm. It is composed of three gatherings with the middle covered with cloth and the sides with silk. These three gatherings were covered separately before sewing at its spine. For a detailed description and images see Helman-Ważny (2014: 69–70).



Fig. 3: Tibetan Bon manuscript (Dzar Rtsis 3) from Jharkot, with supporting textile band at the binding. Photograph by Agnieszka Helman-Ważny (2016).

The Drangsong collection in Lo Monthang, Upper Mustang, Nepal

The Drangsong manuscripts, which are the main focus of this study, are a part of a unique collection, consisting of approximately 340 different items with a total of 3477 folios, cards, or individual sheets of paper. The manuscripts were accidentally found in one of Lo Monthang's houses located in the vicinity of the King's Palace in the town of Lo Monthang, the capital of the former kingdom of Lo (Mustang), in Nepal. The collection is named after the family in whose house it is kept.⁷ Belonging to the Bon religion of Tibet, it represents the ritual repertoire of the priests of the kings of Mustang. These manuscripts were used in rituals for the protection and prosperity of the kingdom, its subjects and members of the royal lineage. The collection was assembled from different parts of Tibet and the Himalaya over six centuries and was used until the priestly line ended in the 1950s or 60s.

From 2019 these manuscripts became the main focus of the project entitled *Protecting the Kingdom with Tibetan Manuscripts: Codicological and Historical Analyses of the Royal Drangsong*

⁷ For a more detailed description of the Drangsong collection and preliminary research on this topic see Helman-Ważny and Ramble (2023: 107–32).

Collection from Mustang, Nepal, which is carried out in partnership with Professor Charles Ramble of the Ecole Pratique des Hautes Etudes, Paris, and funded by the National Science Centre, Poland (project no. 2018/30/M/HS3/00372). The project aims to examine the Drangsong collection through a combination of research methods that address both formal and functional features of the manuscripts.⁸ Each manuscript is considered from three perspectives: first, as an artefact: the end product of cultural, artistic and scribal activities in a particular area; secondly, as the support of a text with cultural meaning that can, in combination with other texts, contribute to our knowledge of little-understood areas of the Bon religion and how it operated in relation to political power; and thirdly—insofar as each manuscript is both an intrinsically sacred object and a repository of liturgical narratives and instructions—as an essential component of a living, though endangered, tradition of ritual performance.

This article is concerned with the sixteen sewn manuscripts from the Drangsong collection (Fig. 5). These *deb ther* books were explored with respect to the technical details of their binding, the interdependence of format and function, as well as their manufacturing materials. The idiosyncrasies of particular artefacts with respect to their formats, dimensions and methods of sewing are also discussed versus shared features noticeable only when these books are seen as a collection.

The corpus of Drangsong bound books under investigation

Despite the dominance of the *poti* format, an unusually large number of ritual items found within the Drangsong collection had the form of bound books. These manuscripts, represented by sixteen items,⁹ whether sewn at the top or to the left, usually measure 9–10cm×27–30cm, which is very close to the measurements of the other loose-leaf manuscripts from the same collection. The bound-book format probably better served the purpose of such manuscripts, since it is easier to follow the text when leaves are fixed in the right order, especially when used during ritual performances in various locations. Likely due to their function, most of the examined manuscripts show signs of heavy use, which is probably why both the sewing-thread and other features of the structure of these books are not always satisfactorily preserved. Furthermore, some manuscripts, as illustrated by nos. 252 and 267, have the front pages missing. All the manuscripts are individually described in the Appendix.

⁸ For the digitised images of Drangsong manuscripts see the website *Mustang Manuscripts: Documentation and Preservation* (http://mustang.uw.edu.pl/?page_id=7455&lang=en) (accessed 4 December 2023).

⁹ These were manuscripts nos 3, 4, 5, 6, 7, 8, 9, 12, 14, 16, 54, 70, 73, 97, 252 and 267.



Fig. 4: Drangsong manuscripts after being sorted into distinct texts, then numbered and wrapped in the protective cloth. Photographs by Thomas Schrom (2022).



Fig. 5: Examples of bound manuscripts from the Drangsong collection. Photograph by Agnieszka Helman-Ważny (2022).

Auxiliary information from the manuscripts' text

Most of the examined manuscripts contain divinations, mantras, ritual instructions, prayers, as well as invocations to local territorial gods or other deities of the Bon religion and Tibet.¹⁰ All these topics suggest that these books were actively used in various types of divination practices and protective rituals, since they contain both the liturgy that is recited by the priest and instructions concerning the various substances required and the steps in the performance.

Manuscripts nos 5, 8, 16, and 73 are concerned with divinations. Manuscript no. 5, *Divination Text of A bse, the btsan* Divinity of the Cliffs** (Tib. *Brag btsan a bswe'i mo yig*),¹¹ contains a text associated with the Bonpo divinity A bse mdung dmar.¹² Manuscript no. 8, *Astronomical Calendar Cycle of Twelve Years* (Tib. *Lo 'khor bcu gnyis skyes tshes...*), deals with astrology and

¹⁰ The translation of titles and colophons, which were used as a base for this short summary of text-related information relevant to the Drangsong bound books, were provided by Charles Ramble and Naljor Tsering.

¹¹ This and all following titles were transcribed by Charles Ramble.

¹² Names of people and divinities appearing in the texts cited will be given in Wylie transliteration.

elemental divination combined with Indian and Mongolian traditions. Manuscript no. 16 (title missing) contains a divination instructing people how to do the appropriate rituals if they are sick at any time of the day. Last in this group is manuscript no. 73 containing the *Chinese Red-Water Divination* (Tib. *rGya nag dmar chu*) text. Instructions on how to use mantras and rituals to treat rabies are included in manuscript no. 3, *A Method for Treating Rabies* (Tib. *Khyi smyon cos[bcos] thabs*). This text contains mantras for curing dogs, sheep, horses and other animals with simple rituals, as well as a mantra for identifying thieves.

The next group of manuscripts is concerned with fumigation rituals. These are: manuscript no. 4, *A Collection of Fumigation Ritual Texts* (Tib. *Bon skyong bsang 'dus [bsdus]*); manuscript no. 6, *Fumigation Ritual for Removing Grasshoppers, Other Insects, and Birds from the Fields, and also for Treating Diseases of Humans and Cattle and for Resolving Conflicts, among Other Things* (Tib. *Zhing la 'bu tshag pa sogs srin 'bu'i rig[rigs] dang/ bya dang byi ba la sogs pa'i bzhi [zhi] ba'i bsangs[bsang] gi rim pa dgos 'dod 'byung ba*); and manuscript no. 12, *The fumigation offering of sTong rgyung (sTong rgyung mthu chen)* (Tib. *sTong rgyung gis[gi]rngan[brngan]bsangs[bsang]*). The text no. 6 is concerned with the fumigation ritual for removing field pests, illnesses and for ending wars. The text no. 12 is a fumigation offering ritual to all the mountain gods in Tibet, and the twenty most famous holy mountains in the world, mainly in India, Tibet and China.

The following collection of texts, represented by manuscripts no. 7, 54, 70 and 97, is concerned with invocations of local territorial deities. Manuscript no. 7, *Offerings to and Worship of the Territorial Gods* (Tib. *Yul sa lha mchod*), contains invocations of the territorial gods of Lo Monthang and surrounding areas. Manuscript no. 54 (title missing) contains a libation (*gser skyems*) offering to the deities of the Bon religion. Manuscript no. 70 (title missing) is a preliminary fulfilment and confession of the general *bsang* rituals. Manuscript no. 97 (title missing) contains an offering prayer to the protectors and guardians of the Yungdrung Bon doctrine, dakinis, as well as all the worldly gods and local deities.

In Tibetan books, the text may occasionally contain a date and place of production, or mention a patron, artist, owner or other persons whose dates we know. Fortunately, many of the Drangsong manuscripts contain useful information in the colophons, for example, the colophon of manuscript no. 4 containing the collection of fumigation texts for the protectors of Bon. As one can read there, this manuscript is attributed to dMu rgyal rNal 'byor nyi ma. This is another name of the well-known scholar gShen nyi ma rgyal mtshan (fourteenth century AD), from the gShen lineage in Central Tibet. He founded the Ri rgyal khri brtan nor bu rtse monastery in Tsang when he was thirty years old in 1360.¹³

In addition to people's names, the colophons mention the places where these texts were

¹³ This information, along with the translation of the colophon, was provided by Charles Ramble and Naljor Tsering.

created, as in the case of manuscripts nos 5 and 6. Thus, the colophon of manuscript no. 5 reveals the name of its scribe as sMon rgyal dmu tsa nam mkha' ba, who is supposed to have written the quick divination of the A bse, the btsan divinity of the cliffs, with his fingertip in front of Lake Dangra, in the land of the middle part of the entrance of Zhangzhung. From this information the author can be identified as a member of the sMon rgyal lineage in Kham, eastern Tibet. The area of Lake Dangra, where he composed the text, is located in Nyima country, Nagchu Prefecture, in the Tibet Autonomous Region.

The colophon of manuscript no. 6 mentions the scribe's name and the place where he created the manuscript. Thus, we can learn that a person named bDe chen gling pa wrote this manuscript on the high peak of Padma Ri, in sDan (=Dan) yul, at the behest of the ruler Tshe dbang phun tshogs. This information suggests that the text was written in the nineteenth century. The author, bDe chen gling pa (1833-?),¹⁴ is a well-known *gter ston* (treasure discoverer) in both the Bon and Buddhist traditions. The location where the text was written, Denma ('Dan ma), is in Joda ('Jo mda'), in Kham (eastern Tibet), on the west bank of the Yangtse river.

The colophons of both manuscripts nos 5 and 6 may suggest that the Drangsong collection originated from the region of Kham, but the colophon of manuscript no. 7 leaves no doubt that this manuscript was produced near the site where the collection was actually found. Manuscript no. 7 is written by the knowledge-holder 'A pha Khyi dmar ri when he subdued the gods in Lo Montang.¹⁵ 'A pha (pronounced 'Awa') is an older, and now obsolete, name referring to the area corresponding to Lo. Khyi dmar ri seems to be another name of the Drangsong family.

In other texts, too, the identification of individuals, the tracing of lineages, or the determining of names of teachers may lead to an approximate date. This, however, cannot on its own be accepted as the absolute dating of the manuscript since this method will not distinguish an original text from a copy or a forgery. It is especially true in the case of Tibetan books because the textual content and the book itself may be from two different periods of time, depending on the common tradition of the copying of religious texts for gaining merit.

The scribe does not always mention whether a text has been copied from an older manuscript, even if this was the case. However, the colophon of manuscript no. 12 makes it clear that the manuscript is a copy that was made by Drang srong gYung drung because the original had become blackened and difficult to read. The end of the colophon reads:

¹⁴ See Buddhist Digital Resource Center Preserving Buddhist Literature for the World, bde chen gling pa born 1833, <https://library.bdrc.io/show/bdr:P1664?uilang=en> (accessed 30 July 2024).

¹⁵ See Manuscript Ds 7, Mustang manuscripts: Documentation and Preservation, http://mustang.uw.edu.pl/?page_id=10001&lang=en (accessed 15 December 2023).

da lta drang srong g.yung drung bdag gis yi [yig] zugs [gzugs] dang bdag [dag] cha thob cha sogs ma shes skyang [kyang]/ ma yig snyings [rnying] par sangs [song] nas nag po 'gro yod skyong pa debbs phyung bya rgyu med par yod/ nyes 'gal phyis [mchis] na skyabs yul lha la bshags/ bkra shis dpal 'bar 'dzam gling rgyan du byon [shog]/ zhal gro [dro]/ byin che'o/ zhu dag/

And now I, Drang srong gYung drung, even though I am not gifted with spelling or teachings, since the original text had become blackened with age, should protect it without any addition or omission. If there are any mistakes, I ask forgiveness of the territorial gods. May auspices and glory be the ornament of the world. May there be good fortune and great blessings. This has been proof-read.¹⁶

This text, indeed, could have been copied many times, since it is widely read in Bonpo communities in Kham and Amdo. Its author, Rig 'dzin 'A pha khyi dmar, is identified as the disciple of a certain Yang ston chen po,¹⁷ and is said to have been a contemporary of the first king, A ma dpal (1380–ca.1440) (Jackson 1984: 98; Vitali 2012). The name Yang ston chen po, the 'Great Teacher of the Ya ngal Clan', is usually applied to Yang ston Shes rab rgyal mtshan, the father of the founder of Lubrak (Klu brag) who lived in the eleventh century, and therefore a full two centuries before A ma dpal. It is likely therefore that the name was also applied to a later member of the Ya ngal lineage. Thus, despite all the useful information provided, we cannot date this manuscript on the basis of the text only.

Looking at the various colophons, it is also possible to find often-repeated phrases used to complete these manuscripts. They usually include both words of blessing and other information, such as for example 'this has been proof-read' (*zhu dag*; Ms no. 12),¹⁸ or 'book is completed' (*rdzogs+ho*; Ms no. 73).¹⁹

The end-phrase can also be found in the colophon of manuscript no. 70, written by a certain gYung drung rig 'dzin:

phyin nas kyi zhang[?] 'gro thu['gro don] thar[mtha'] ru phyin pa[par] shog/ g.yung drung gyung[drung] bon kyi[gyi] rta spa[bstan pa] dar pa[ba] shog/ chos phun sum tshogs shogs[shog]/ zha gro[zhal dro]/ zha gro[zhal dro]/ zha gro[zhal dro]/

¹⁶ See Manuscript Ds 12, Mustang manuscripts: Documentation and Preservation, http://mustang.uw.edu.pl/?page_id=10024&lang=en (accessed 4 December 2023).

¹⁷ For Yang ston chen po see Blezer (2009: 71–160); Kramer (2008: 14).

¹⁸ See Manuscript Ds 12, Mustang manuscripts: Documentation and Preservation, http://mustang.uw.edu.pl/?page_id=10024&lang=en (accessed 4 December 2023).

¹⁹ See Manuscript Ds 73, Mustang manuscripts: Documentation and Preservation, http://mustang.uw.edu.pl/?page_id=10848&lang=en (accessed 4 December 2023).

May [this text] in the future be able to benefit all living beings; may the doctrine of Yungdrung Bon flourish and prosper. Good fortune, good fortune, good fortune!²⁰

And in the manuscript no. 5 where the scribe says:

De ltar brag btsan mgyogs mo 'di/ grwa slob 'ga' yis bskul ba'i ngor/ smon rgyal dmu tsa nam mkha' bas/ zhang zhung sgo mo bar ba'i yul/ dwangs ri'i mdun du sor rtser bskrun/ mos pa'i thugs la bcag par 'tshal/ mi mos ris su bor bar gyis/ nyes mchis bstan srung nyid la mthol/ bra shis dge legs 'phel gyur cig/

May it delight the hearts of those who like [this work], and may those who do not like it leave it to one side. For any mistakes there may be, I beg forgiveness of the protectors of the doctrine. May all be auspicious.²¹

Among the most common end-phrases are the invocations 'Virtue' (*dge'o*; Ms nos 4 and 158, among many others) or 'May [all] be auspicious' (*bkra shis par gyur*; Ms no 54). These indicate that scribes believed in the merit generated by copying these religious texts.

Technique of binding

The thirteen Drangsong manuscripts under investigation had their folios folded along the longer edge and sewn at the top (relative to the text direction), as illustrated by the manuscripts archived as nos 3 and 6 (Figs 6, 7). The three remaining manuscripts were bound on the left, as illustrated by the manuscripts archived as nos 4 and 8 (Figs 8, 9). These top-sewn books measure 6–12cm×17–40cm, and the left-sewn ones measure 6.5–9cm×20–29cm. The bi-folios of the manuscripts sewn at the top are much closer in format to a square, measuring 12–24cm×17–40cm, when compared to the bi-folios of the manuscripts sewn on the left, which have a far more elongated format, measuring 6.5–9cm×40–58cm. These bi-folios were made of long rectangular leaves, possibly originally prepared for the *poti* loose-leaf format, then folded in half and sewn.

The manner of cutting the pages for these two types of *deb ther* formats is obviously different. The top-sewn bi-folios are cut perpendicularly to the longer edge of a full-size paper sheet (equal in dimensions to the papermaking mould), while the side-sewn bi-folios are cut parallel to the longer edge of the paper sheet. If it is assumed that originally a

²⁰ See Manuscript Ds 70, Mustang manuscripts: Documentation and Preservation, http://mustang.uw.edu.pl/?page_id=10827&lang=en (accessed 4 December 2023).

²¹ See Manuscript Ds 5, Mustang manuscripts: Documentation and Preservation, http://mustang.uw.edu.pl/?page_id=10827&lang=en (accessed 4 December 2023).

whole sheet of paper was efficiently used, it can be deduced that the sizes of the papermaking moulds were ca. 30–40cm×50–56cm (considering the dimensions of the largest books). This corresponds to the standard dimensions of papermaking sieves still used today.²² It is, however, difficult to ascertain the size of the papermaking mould from the available folios, since the folios would have been cut to the desired format.



Fig. 6: Manuscripts bound at the top containing *A Method for Treating Rabies* (archived as manuscript no.3). Drangsong collection, Lo Monthang, Upper Mustang. Photograph by Thomas Schrom (2022).

Manuscript no. 7 (Fig. 10) represents slightly different proportions to the others. It is bound at the top, and then folded in half lengthways, which makes it more portable.

Manuscript no. 252 was originally composed of loose leaves, but at some later point it was bound into a *deb ther* sewn at the top (Fig. 11). The type of paper used to join loose leaves into bi-folios is obviously different from the paper used originally for the book leaves.

The structure of the *deb ther* manuscripts described above is visualised in the 3D models (Fig. 12). Most of these manuscripts contain just one gathering with three sewing-stations located at varying distances, generally in the middle area of the band. The manuscripts usually have from five to ninety-four folios of one or two layers of paper glued together, then folded in half. This is equal to three to forty-seven bi-folios. More than one (mostly

²² Information collected from interviews of papermakers in Nepal in the years 2015–2019 suggests the standard mould frame sizes nowadays are 50.8×76.2cm, 22×32cm and 37×54cm. Even from those few dimensions it is possible to see that there were no strict standards for the size of paper (Helman-Ważny and Ramble 2023).



Fig. 7: Manuscripts bound at the top containing *A Fumigation Ritual for Removing Field Pests and Illnesses and for Ending Wars* (archived as manuscript no. 6). Drangsong collection, Lo Monthang, Upper Mustang. Photograph by Thomas Schrom (2022).



Fig. 8: Manuscript bound at the side containing *A Brief Fumigation Ritual for the Protective Divinities of Bon* (archived as manuscript no. 4). Drangsong collection, Lo Monthang, Upper Mustang. Photograph by Thomas Schrom (2022).



Fig. 9: Manuscript bound at the side containing the astrological text *Astronomical Calendar Cycle of Twelve Years* (archived as manuscript no. 8). Drangsong collection, Lo Monthang, Upper Mustang. Photograph by Thomas Schrom (2022).

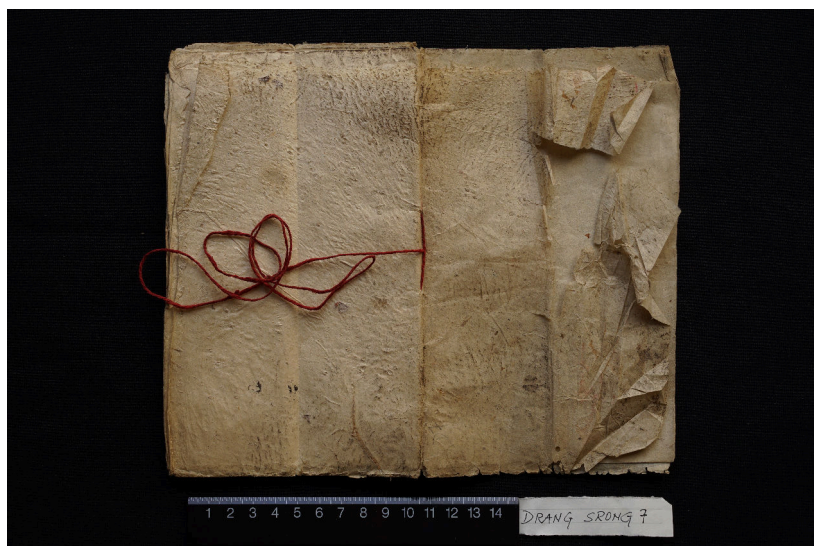


Fig. 10: Manuscript bound at the top (archived as manuscript no. 7), then folded in half afterwards. Drangsong collection, Lo Monthang, Upper Mustang. Photograph by Thomas Schrom (2022).

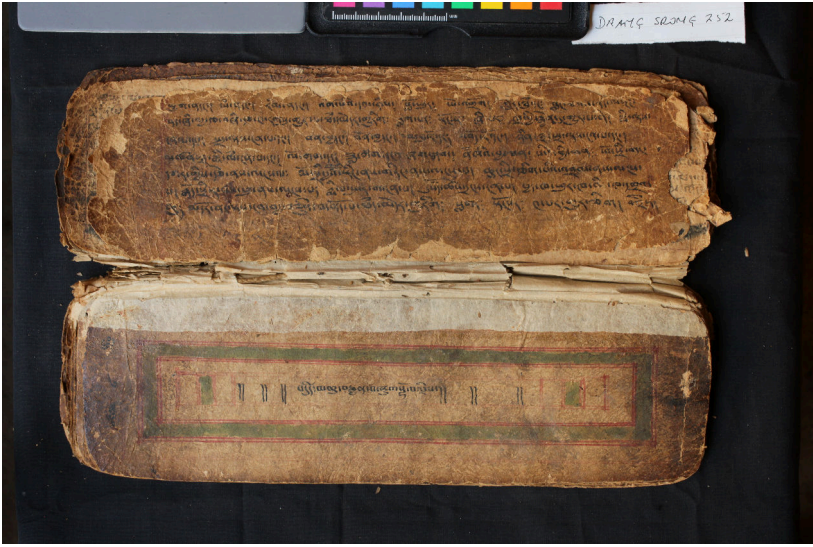


Fig. 11: The loose-leaf manuscript bound at the top later (archived as manuscript no. 252). Drangsong collection, Lo Monthang, Upper Mustang. Photograph by Thomas Schrom (2022).

two or three) gatherings are only found in the manuscript nos 8 and 12, composed of thirty-six and ninety-four folios respectively.

One of these much less common multi-gathering book constructions is found in manuscript no. 12, measuring 15cm×40cm, which has four sewing-stations along the top band fold. The distances between the sewing-stations are 5, 8, and 9cm, without any regular pattern. The book has a red cover with a floral pattern made of textile attached to the paper. The manuscript is severely damaged and its structure is broken. It has two gatherings composed of sixty-nine (1–69) and twenty-six (70–97) folios respectively. There is an abundance of barley grains inside the book, which are probably remnants from the performance of a fumigation ritual, which is described in the book. During this ritual the barley grains are thrown around (Fig. 13), just as, for example, rice grains are used these days in Kathmandu. Thus, the extensive damage done by mice and worms is probably not surprising. The two types of thread (grey and blue), the unclear construction of the book, the loose folios detached from the book block, as well as the disorderly sewing-pattern, suggest that someone tried to return this book to use by basic repairs, which were not entirely successful.

The books studied here are in principle sewn in the same way; however, some variations were observed, such as different places where the knot for the binding thread started. The

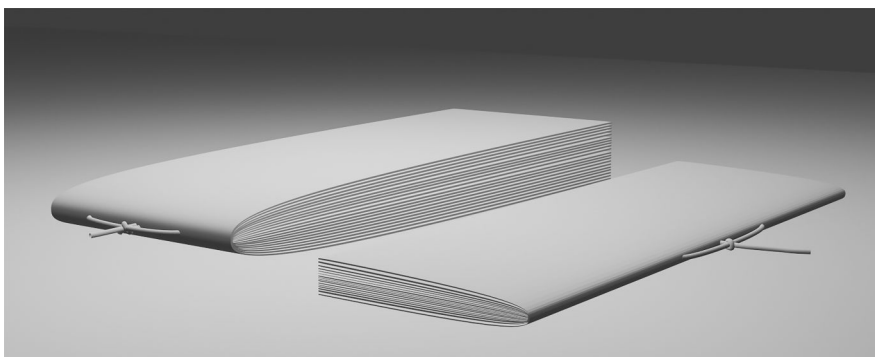


Fig. 12: The 3D models of two types of *deb ther* manuscripts sewn at the top and at the left folds. Drawing by Olga Ważny (2022).

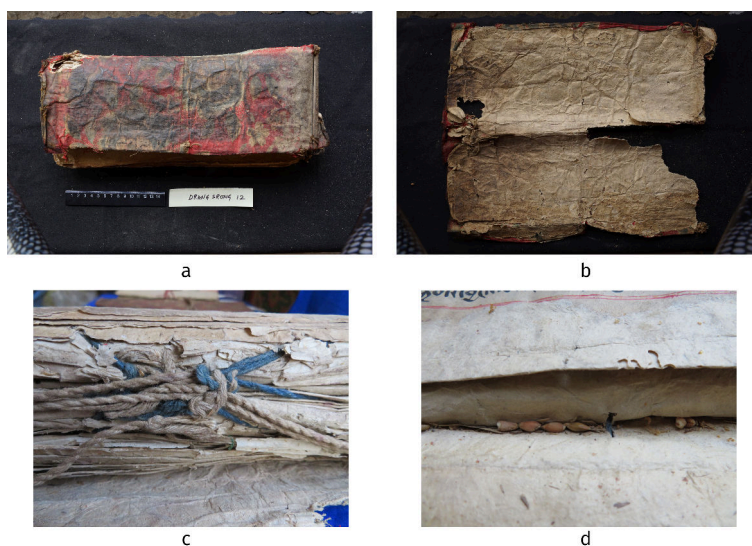


Fig. 13: The highly damaged top-bound manuscript *The Fumigation Offering of sTong rgyung (sTong rgyung mthu chen)* (archived as no. 12) with barley grains visible inside the book. Drangsong collection, Lo Monthang, Upper Mustang. Photographs a–b by Thomas Schrom (2022); photographs c–d by Agnieszka Helman-Ważny (2022).

pattern of sewing usually resembles the shape of the letter 'B' or the number '8' (with the starting knot either outside or inside the book). As shown in Fig. 14, the thread starts with a knot at the end, and then goes through the middle sewing-station leaving the knot outside the folded bi-folios, in the case of pattern 'B' (Fig. 14 a). From that point the thread comes to one of the outer sewing-stations, going over the bend to the opposite outer sewing station and returning to the middle of the book, then coming out through the same sewing-station from which it started. In the case of the figure-of-eight pattern, the knot is usually inside the book; the thread starts in the middle, goes to outer sewing-stations, then is taken outside the book, left long enough that it can be wound around the book a couple of times before being tied, thereby securing all the folios (Fig. 14 b).

The threads can be of different thickness, material and structure. Their ends are sometimes nicely decorated, as demonstrated by manuscript no. 6, which is tied with a thread completed with a cowrie shell (Fig. 15). Naturally greyish, as well as red and blue threads of various thickness, are documented (Fig. 17). In manuscripts nos 9 and 14 the sewing-thread is not preserved.

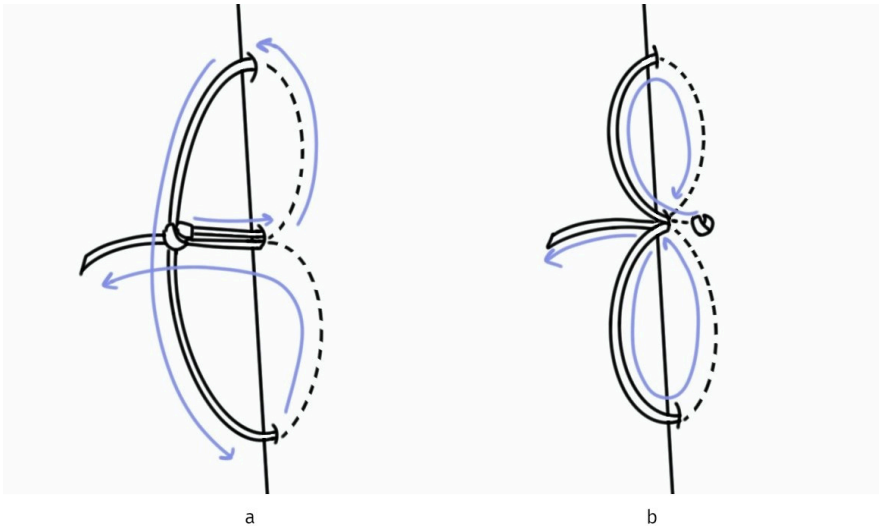


Fig. 14: The models of 'B' and '8' sewing-patterns. Drawing by Olga Ważny (2022).

Some of the manuscripts have covers made of textile or thicker paper in glued layers. An example is the manuscript archived as no. 5, which has a textile cover that has been attached by stitching it to the first paper leaf and then folding it inside (Fig. 16). Such methods of sewing the paper together with other layers of paper or textile with thread are common in Tibetan and other Himalayan cultures, including all kind of repairs, when torn fragments



Fig. 15: Manuscript bound at the top and tied with a thread completed with a cowrie shell (archived as manuscript no. 6). Drangsong collection, Lo Monthang, Upper Mustang. Photographs by Agnieszka Helman-Ważny (2022).

of paper are sewn with thread rather than glued together.

Materials

The sixteen manuscripts were all written on traditional paper made with a floating mould equipped with a textile sieve. This means that no specific pattern can be observed in the backlit images. This type of paper is prevalent in the whole Drangsong manuscript collection. The results of the fibre-composition analyses made it possible to distinguish two main groups of components. The first group is largely homogeneous, containing mainly *Daphne* fibres (Fig. 17); the other is composed of both *Daphne* and *Stellera* fibres (Fig. 18).²³ Manuscript no. 14 contains other fibres requiring further identification. The significant content of *Stellera* fibres may suggest that these manuscripts were produced at an elevation over ca. 3600m above sea level.

Within the Thymelaeaceae family of plants, *Stellera chamaejasme* fibers are distinctive in the examination of historic papers, and can be clearly differentiated from *Daphne*, *Edgeworthia*, and *Wikstroemia*, despite the fact that all plants belong to the Thymelaeaceae family. The latter three, however, are still not fully referenced and cannot be easily distinguished from each other. However, differences between the above-mentioned plants and other plant species are obvious, so it is possible to distinguish particular types of raw materials.

Tibetans have been making paper from the fibres of plants in the Thymelaeaceae family since at least the ninth century (Helman-Ważny and Schaik 2013: 735). Primarily, fibres

²³ The fibres of *Daphne* and *Stellera* spp. were differentiated by a number of specific characteristics, such as the ratio of lumen width to fibre wall, the shape of fibre ends, and fibre flexibility.

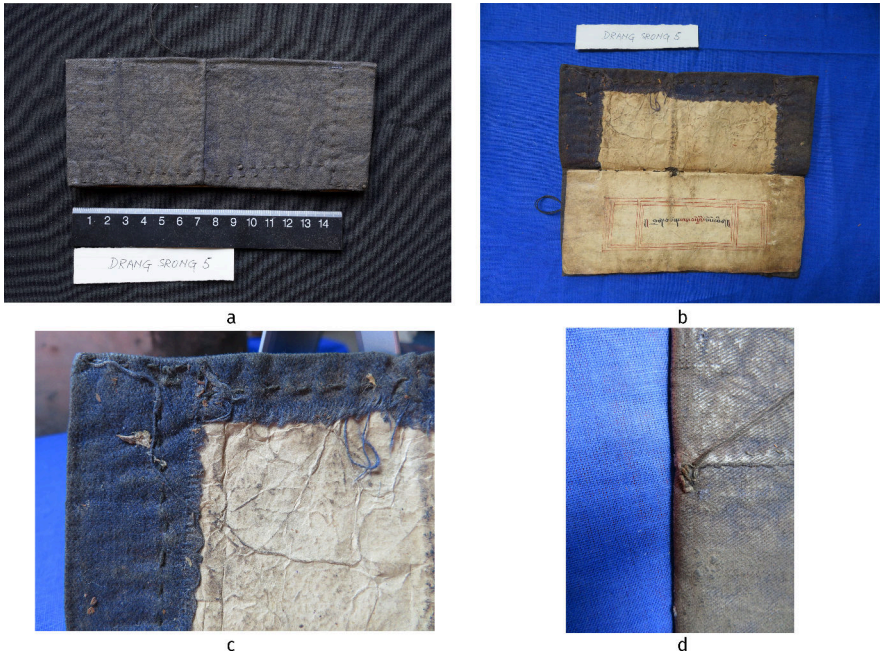


Fig. 16: Manuscript bound at the top with a textile cover that has been attached by stitching it to the paper leaf and then folding it inside (archived as manuscript no. 5). Drangsong collection, Lo Monthang, Upper Mustang. Photograph a by Thomas Schrom (2022), and photographs b–d by Agnieszka Helman-Ważny (2022).

of the *Daphne* species, common in the Himalayan valleys, were used below ca. 3600m, and the fibres collected from the roots of the *Stellera chamaejasme* were used for the same purpose at higher altitudes. The oldest manuscripts in which fibres of the *Stellera* species have been identified are dated to the tenth century (Helman-Ważny 2016a: 180). From the fifteenth century onwards, these two species of plants were often mixed in the production of paper because this resulted in better-quality paper, and this was also associated with the development of printing (Helman-Ważny 2016b: 549–552).

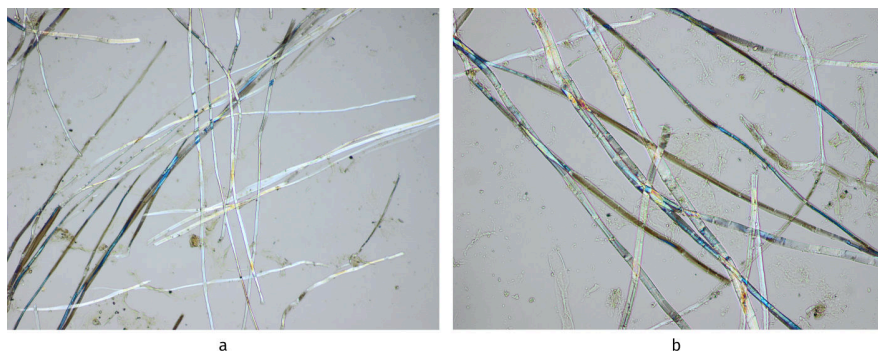


Fig. 17: *Daphne* fibres with broad portions (arrowheads) from manuscript no. 3. Drangsong collection, Lo Monthang, Upper Mustang. Photographs by Agnieszka Helman-Ważny (2022).

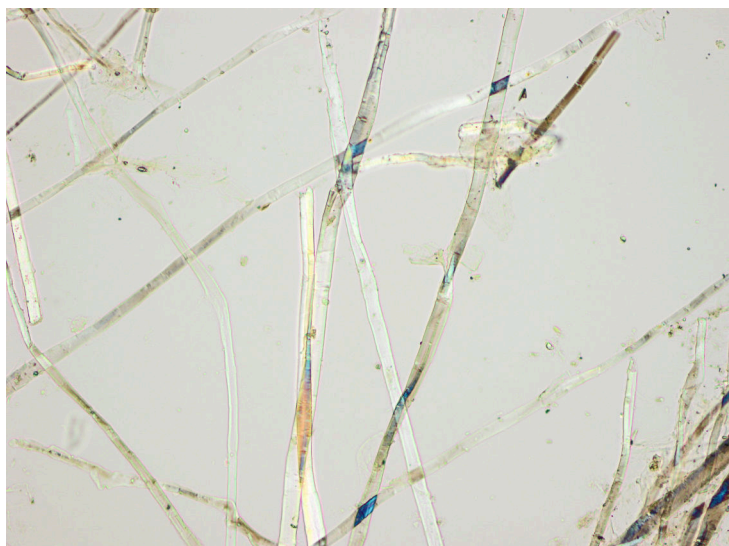


Fig. 18: *Stellera* fibres with ribbon-like shape (arrowheads) in the paper made of both *Daphne* and *Stellera* fibres. Manuscript no. 252, Drangsong collection, Lo Monthang, Upper Mustang. Photographs by Agnieszka Helman-Ważny (2022).

Conclusions

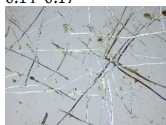
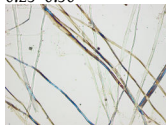

The limited range of topics represented by the Drangsong manuscripts examined suggests that the *deb ther* format is specifically associated with ritual manuscripts. As we can see from the translated colophons, these manuscripts were produced in different places and at different times, but their form and appearance was determined by their function. Within the selected sample of sixteen Drangsong manuscripts the majority, thirteen manuscripts, had their folios folded at the longer edge and sewn at the top, while only three were sewn on the left side. The top-sewn manuscripts are read by turning their folios over along the long edge in the same way as texts in the loose-leaf *poti* format. This connection to the Indian model is probably why this construction was more widely used by Tibetan readers. The manuscripts were in principle sewn in the same way, with only little variation (for example, the places where the knot for the binding thread starts), which might be accidental, originating from the individual habits of these manuscripts' creators. They were all written on traditional paper made by means of a floating mould equipped with a textile sieve. This type is prevalent in the whole Drangsong collection irrespective of book form and text contents. The fibre composition of these papers, although slightly differentiated, cannot testify to any correlation between format, genre and materials, since the sample of investigated manuscripts is too small yet. The results presented here, however, represent important evidence that can be used as a reference for further research. Furthermore, the variety of fibre components suggests that these manuscripts were produced in different places, which is also confirmed by the information found in the colophons. Also, the significant content of *Stellera* fibres may suggest that the relevant manuscripts were produced at an elevation over ca. 3600m above sea level.

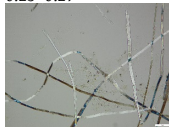
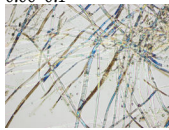
Acknowledgments

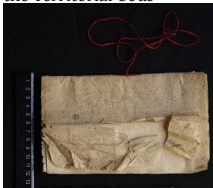
This research is funded by the National Science Centre, Poland, through project no. 2018/30/M/HS3/00372, entitled *Protecting the Kingdom with Tibetan Manuscripts: Codicological and Historical Analyses of the Royal Drangsong Collection from Mustang, Nepal* (PI Agnieszka Helman-Ważny). The research is being carried out in partnership with Charles Ramble of the École Pratique des Hautes Études, Paris.


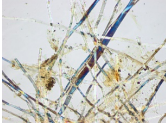

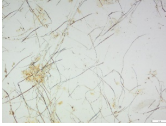

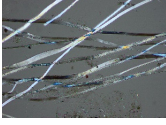
Appendix

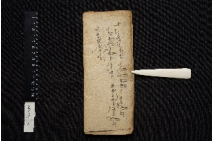
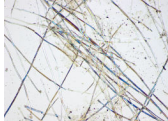

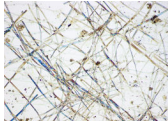
The table below presents a selection of sixteen manuscripts with sewn bindings from the collection of Drangsong manuscripts preserved in Lo Monthang, the capital of the former kingdom of Lo (Mustang), in Nepal.



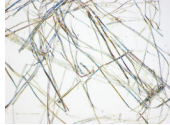
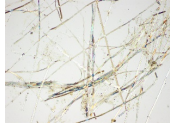
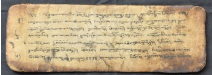
No.	No. of text:	Title (where present) in Tibetan, in Wylie transliteration, and translation	A brief summary of the item's contents	No. of folios and bi-folios	Form of binding and size (h×w, cm)	Paper type No. of layers Thickness (cm) Fibre composition
1	Ms no.3	ལྷོ། ལྷོ་རྩོད་ཅོས་ཁོ་བཙུག་ལྷོ་བཟུང་། ལྷོ་གསལ་ཁོ་བཙུག་ལྷོ་། ཉེ་ཉེ་ལོ་ལོ། <i>khyi smyon cos[bcos] thabs zhugs[bzhugs] swo/ he he om / A Method for Treating Rabies</i>	Mainly instructions on how to use mantras and rituals to treat rabies	19	<i>Deb ther</i> sewn at the top 6.2×19.2	Woven 1 0.14–0.17  <i>Daphne</i> sp.
2	Ms no.4	བོན་སྐྱོང་བསམ་འདུས་ཁོ་བཙུག་། <i>Bon skyong bsang 'dus</i> [bsdus]/ A Collection of Fumigation Ritual Texts	A collection of fumigation ritual texts	38 incl. cover	<i>Deb ther</i> sewn on the left 7.3×20	Woven 2 0.23–0.30  <i>Stellera</i> and <i>Daphne</i> sp.
3	Ms no.5	ལྷོ། ལྷོ་གསལ་བཙུག་ལྷོ་བཟུང་། <i>brag btsan a bswe'i mo yig/</i> Divination Text of A bse, the <i>btsan</i> Divinity of the Cliffs	Divination text associated with the Bonpo divinity A bse mdung dmar	8	<i>Deb ther</i> sewn at the top 7.2×17	Woven 1 0.16–0.19  <i>Daphne</i> sp.

No.	No. of text:	Title (where present) in Tibetan, in Wylie transliteration, and translation	A brief summary of the item's contents	No. of folios and bi-folios	Form of binding and size (h×w, cm)	Paper type No. of layers Thickness (cm) Fibre composition
4	Ms no.6	<p>ལྷོ་ལྷོ་ཞིང་ལེ་འབྲུ་ཚྭ་པ་མོགས་ ལྷོ་ལྷོ་ཞིང་ལེ་འབྲུ་ཚྭ་པ་མོགས་ བྱ་དང་བྱི་བ་ལེ་མོགས་པའི་ བཞི་ཞིག་ལེ་འབྲུ་ཚྭ་པ་མོགས་ གི་རིམ་པ་དགོས་ འདྲོད་འབྲུ་ཚྭ་པ་མོགས་མོ།</p> <p><i>Zhing la 'bu tshang pa sogs srin 'bu'i rig/ [rigs] dang/ bya dang byi ba la sogs pa'i bzhi ba'i bsangs[bsang] gi rim pa dgos 'dod 'byung ba bzhugs so/</i></p> <p>Fumigation Ritual for Removing Grasshoppers, Other Insects and Birds from the Fields, and also for Treating Diseases of Humans and Cattle and for Resolving Conflicts, among Other Things.</p>	Fumigation ritual for removing field-parasites and illnesses and for ending wars	9	<i>Deb ther</i> sewn at the top 6.5×25.8	Woven 2 0.23–0.27  <i>Daphne</i> sp.
5	Ms no.7	<p>ཡུ་ལ་མ་ལྷོ་མཚོ་དྲུགས་མོ།། <i>Yul sa lha mchod bzhugs so/</i> Offerings to and Worship of the Territorial Gods</p>	Invocations to the territorial gods of Lo Monthang and surrounding areas	17	<i>Deb ther</i> sewn at the top and folded once more in half, parallel to the long edge and the binding	Woven with coarse textile sieve print 1 0.06–0.1  <i>Stellera</i> and <i>Daphne</i> sp.



No.	No. of text:	Title (where present) in Tibetan, in Wylie transliteration, and translation	A brief summary of the item's contents	No. of folios and bi-folios	Form of binding and size (h×w, cm)	Paper type No. of layers Thickness (cm) Fibre composition
6	Ms no.8	<p>ལོ་ཁོར་བུ་གཉིས་སྟེན་ཚེས་བརྒྱ་གཟུངས།། <i>Lo'khor bcu gnyis skyes tshes...bzhuqs s+ho/</i> Astronomical Calendar Cycle of Twelve Years</p> 	A work on astrology and elemental divination combining Indian and Mongolian traditions	36	<p><i>Deb ther</i> sewn at the left edge 6.5×29 3 gatherings?</p>	<p>Various types of woven paper 2 0.25–0.36</p>  <p><i>Daphne</i> sp.</p>
7	Ms no.9	<p>Missing སྟོང་སྐུང་གི་སྒྲན་བསངས་བརྒྱུགས་པ་ལེགས།། <i>sTong sgyung gi sngan bsangs bzhugs pa legs</i></p> 	A work that combines astrology (<i>dkar rtsis</i>) and elemental divination (<i>nag rtsis</i>), with many missing folios	4	<p>Loose leaves, but originally <i>deb ther</i> (fragments still sewn) 6–6.5×29</p>	<p>Woven 2 0.14–0.23</p>  <p><i>Daphne</i> sp.</p>
8	Ms no.12	<p>སྟོང་སྐུང་གིས་[གི]རྒྱན་[བརྒྱན]བསངས་[བསང]བརྒྱུགས་པ་ལེགས་སོ།། <i>stong rgyung gis[gi] rngan[brngan]/ bsangs[bsnag] bzhugs pa legs swo/ bzhi ba'i bsangs[bsang] gi rim pa dgos 'dod 'byung ba bzhugs so/</i> Fumigation Offering of sTong rgyung (sTong rgyung mthu chen)</p> 	A fumigation offering ritual to all the mountain gods in Tibet, and the most famous twenty holy mountains in the world (mainly in India, Tibet and China)	94	<p><i>Deb ther</i> sewn at the top 15×40 At least 2 gatherings (1–69 and 70 to 97) with many separated leaves attached later</p>	<p>Woven 2–3 0.28–0.41 Surface polished</p>  <p><i>Daphne</i> sp.</p>

No.	No. of text:	Title (where present) in Tibetan, in Wylie transliteration, and translation	A brief summary of the item's contents	No. of folios and bi-folios	Form of binding and size (h×w, cm)	Paper type No. of layers Thickness (cm) Fibre composition
9	Ms no.14			26	<i>Deb ther</i> (sewing not preserved)	Woven 1 0.9–0.21  Unidentified fibres (sunn hemp?)
10	Ms no.16	Missing 	A work on divination, instructing people how to do the appropriate rituals if they are sick at any time of the day	11	<i>Deb ther</i> sewn at the top with a black cotton twisted thread 6.3×16.5	Woven 1 0.08–0.09  <i>Daphne</i> and <i>Stellera</i> sp. with singular fibre of cotton
11	Ms no.54	Missing 	A golden libation (<i>gser skyems</i>) offering to the deities of the Bon religion	13	<i>Deb ther</i> sewn at the top 12×33.5	Woven with with coarse textile sieve print 1 0.13–0.17  <i>Daphne</i> and <i>Stellera</i> sp.
12	Ms no.70	Missing 	A preliminary fulfilment and confession of the general <i>bsang</i> rituals	10	<i>Deb ther</i> sewn at the top 10×31.7	Woven with woody fibre bundles 1 0.12  <i>Stellera</i> and <i>Daphne</i> sp.

No.	No. of text:	Title (where present) in Tibetan, in Wylie transliteration, and translation	A brief summary of the item's contents	No. of folios and bi-folios	Form of binding and size (h×w, cm)	Paper type No. of layers Thickness (cm) Fibre composition
13	Ms no.73	འགྲུ་རྒྱ་རྣམ་རྒྱུག་མ་ལུ་ <i>rGya nag dmar chu bzhugs swa/</i> Chinese Red-Water Divination	Divination text	26	<i>Deb ther</i> sewn at the left 9×26.5	Woven with textile sieve on the surface 1 0.16  <i>Daphne</i> sp.
14	Ms no.97	Missing 	An offering prayer to the protectors and guardians of the Yungdrung Bon doctrine, dakinis, as well as all the worldly gods and local deities	5	<i>Deb ther</i> sewn at the top 6.8×25.5	Woven 1 0.12–0.18  <i>Daphne</i> and <i>Stellera</i> sp.
15	Ms no.252	བདུན་ཅི་རྩུན་བཞུག་ལྷོ། བཟ་ཤིས། <i>bdud rtsi chu rgyun bzhugs+ho/ bkra shis/</i> ལྷ་གཏོང་ན་གཡུ་ཏུ་བཞུག་ལྷོ། <i>klu gtor na ga u ta bzhugs+ho/</i> བདུན་ཅི་རྩུན་བཟང་དོན་གཏོང་མ་ ལྷ་བཞུག་ལྷོ། <i>bdud rtsi chu rgyun bar do'i gtor ma dang chu sbyin nag mo bzhugs+ho/</i>	A compilation of several works, including rituals for offerings of tormas and water to various divinities	30	<i>Deb ther</i> sewn at the top with some separated leaves 9×29.5–30	Woven 2 0.2–0.41  <i>Daphne</i> and <i>Stellera</i> sp.
16	Ms no.267	Missing 		28	<i>Deb ther</i> sewn at the top	Woven

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