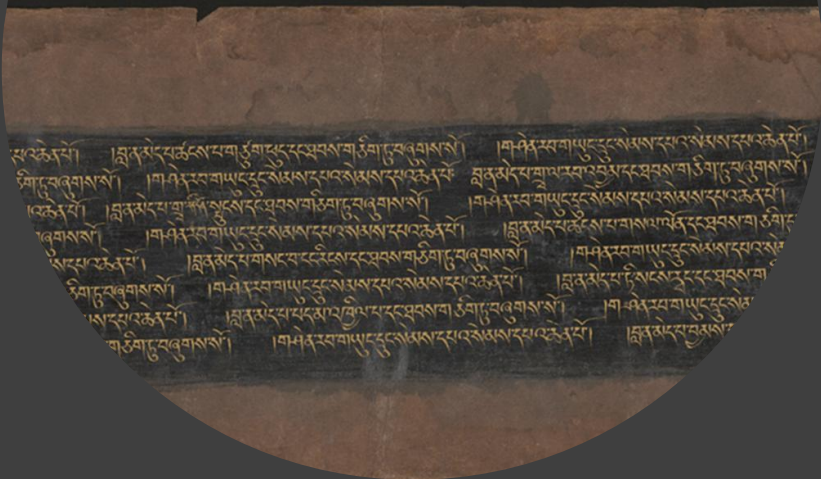
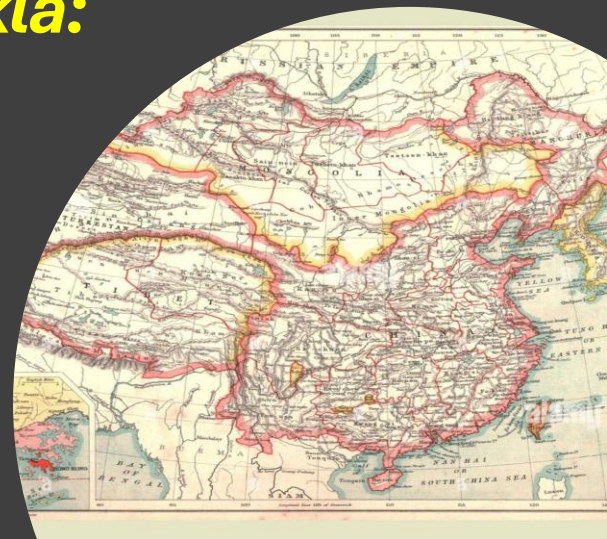
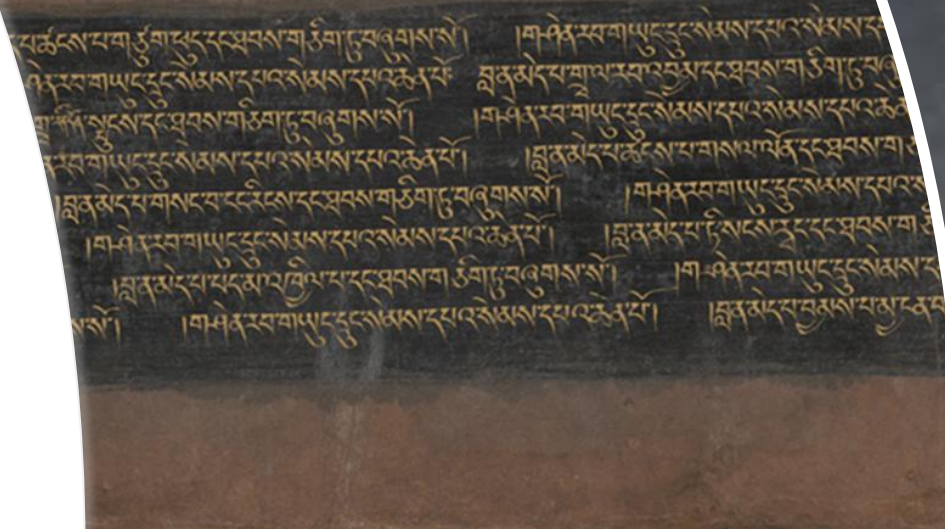




**Gold, buffalos and the last king of Chakla:
mysteries of a bön manuscript**



- “These very old Bön books have been in the family of the late king of Chaglag, East Tibet, for about seven hundred years up till the death of the king and the destruction of the Bön lamasery by the Chinese soldiers in the year 1920.... A number of the loose leaves are missing or destroyed by the soldiers“
- Theo Sørensen





康定北门市场 (1929年摄)



1930年11月，康定民居及周边风景



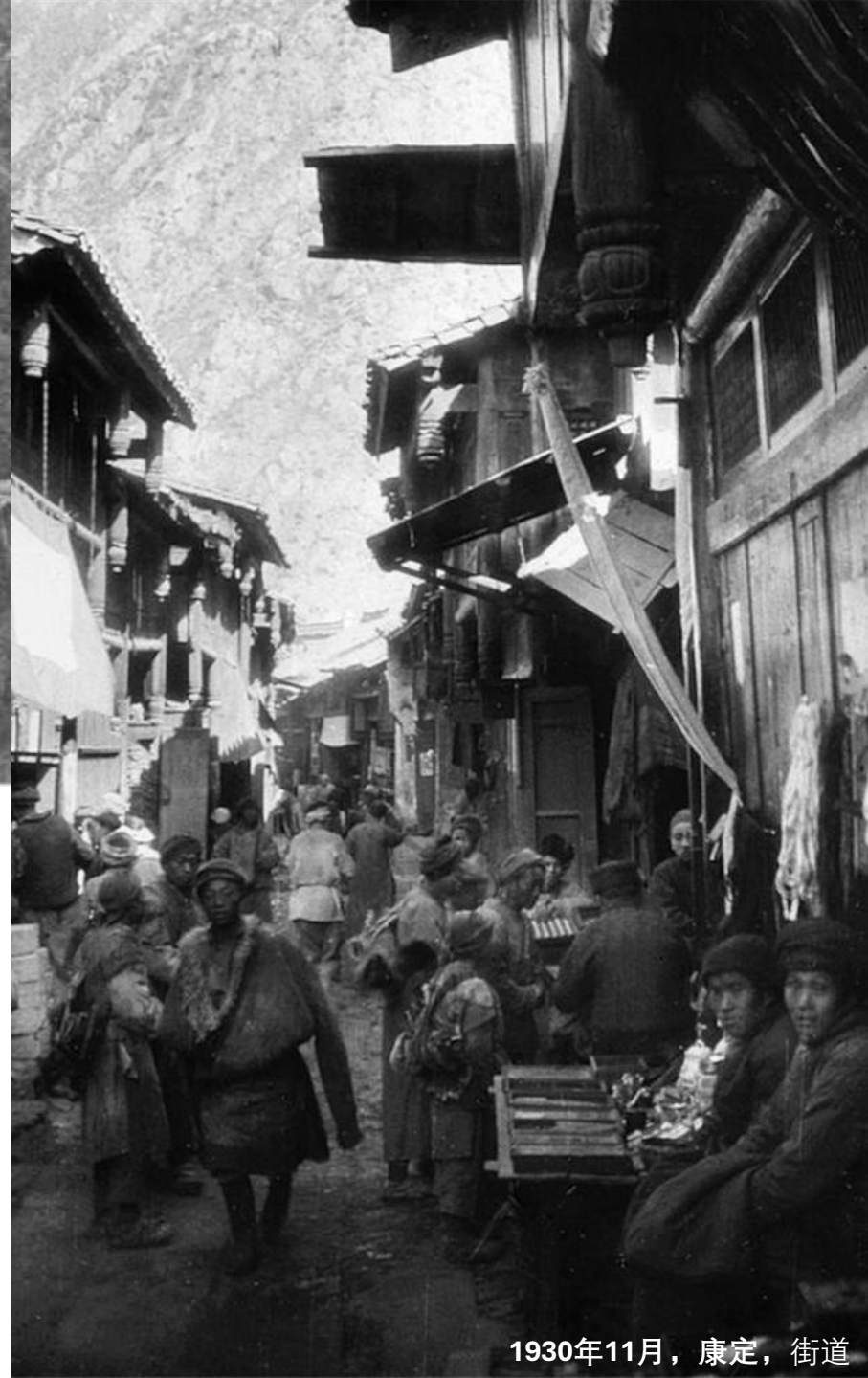
The Century Atlas of the World [John Walker & Co, Ltd., London, 1902]



Theo Sørensen (1873-1959)

Tibetan Pioneer Mission, probably 1894

- * Arrived in Tatsienlu/Datsendo/Kangding 康定 (from 1904) in 1899 and stayed until 1923.
- * Travelled extensively in the Tibetan areas, spreading Christian literature, studying and collecting Tibetan scripture.
- * As a missionary his accomplishments were 'somewhat limited'. Snl. Encyclopedia Norvegicum
- * Was in 1922 awarded Fellow of the Royal Anthropological Institute and in 1923 Fellow of the Royal Geographical Society i London.



1930年11月，康定，街道



CENTRE FOR THE
STUDY OF
MANUSCRIPT
CULTURES



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des Hautes Études

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*** Collaboration project started in 2024 to examine the provenance and scribal practices of the Khams Brgyad manuscript in Oslo University Library.**

*** Digitize and publish the entire manuscript. 11 incomplete volumes of 16. Roughly 2000 double sided folios.**





- Spectroscopy – can identify which chemical elements the material contains.

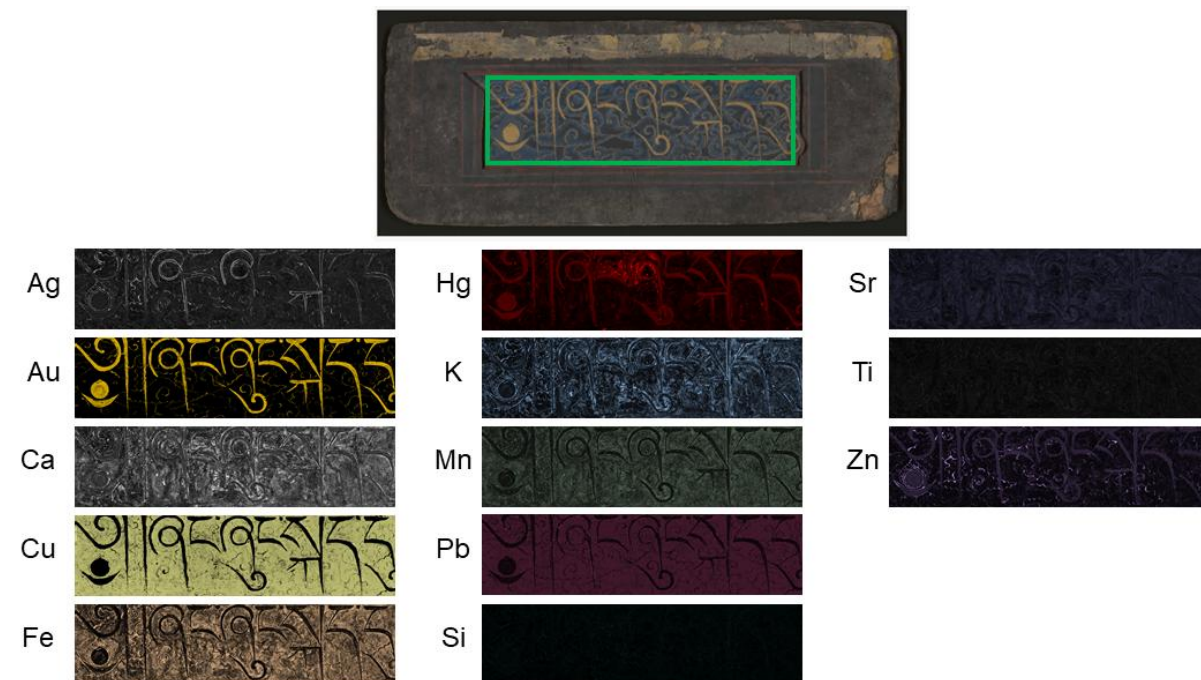
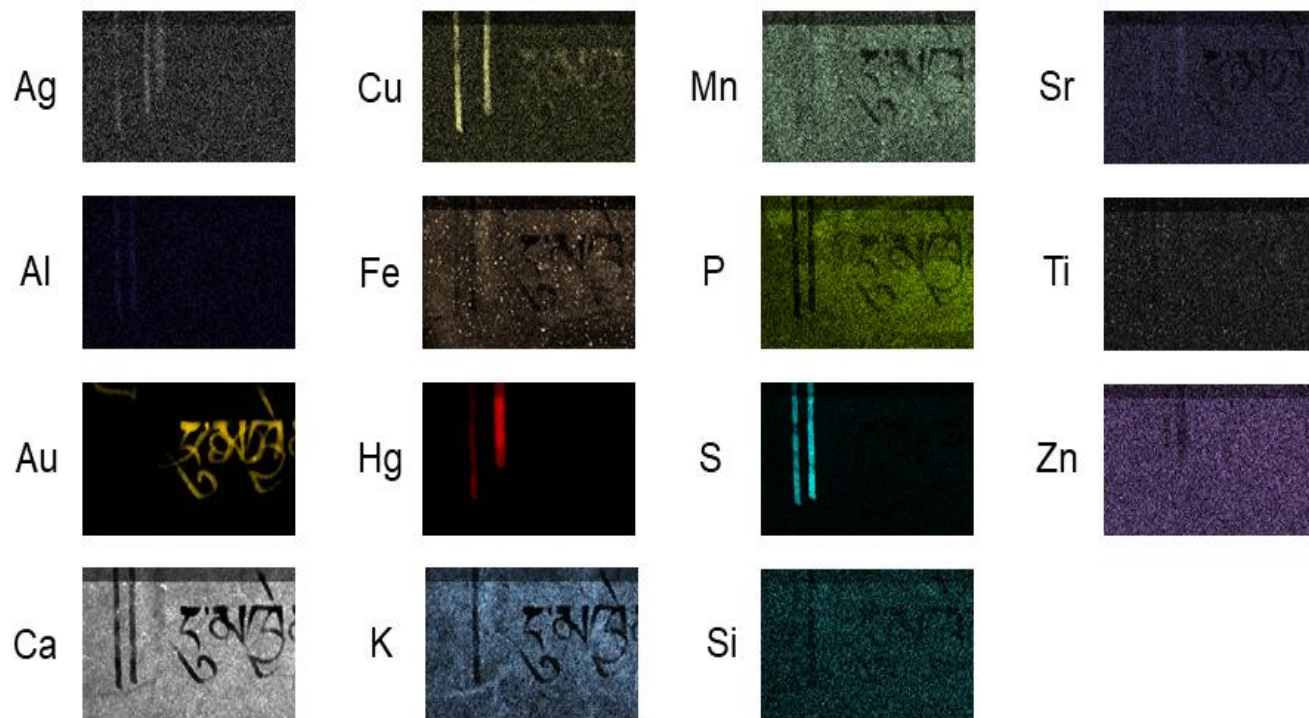


Identification of inks, pigments and dyes

Scanning μ XRF analysis



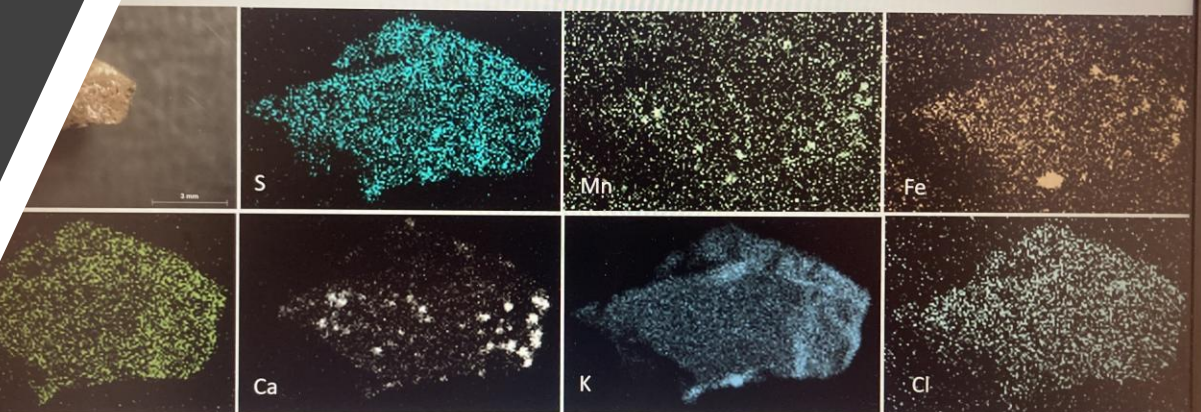
Scanning XRF allows for measuring of X-ray induced fluorescence of materials over selected measurement areas. The obtained elemental maps enable isolation of signals attributable to different elements present in the sample. The ink in the folios of Khams brgyad is composed of gold particles (Au), the metallic gray lines contain silver (Ag), the red lines contain sulphur (S) and mercury (Hg) based pigment, while blue areas on the cover of volume GA contain copper-based pigment (Cu).





Brains, buffalos and yaks

XRF analysis: dried yak brain sample



Scanning XRF allows for collection of fluorescence response for selected measurement areas. The obtained elemental maps enable isolation of signals attributable to different elements present in the sample. Based on the data collected for the dried yak brain sample, a few elements show highest concentration, including phosphorous, sulphur, iron, chlorine,

manganese, potassium and calcium. Presence of sulphur may be linked to cysteine content, and of phosphorous to phospholipids, but other origins can't be excluded.

ATR-FTIR analysis of dried yak brain sample and *thingshok* layer

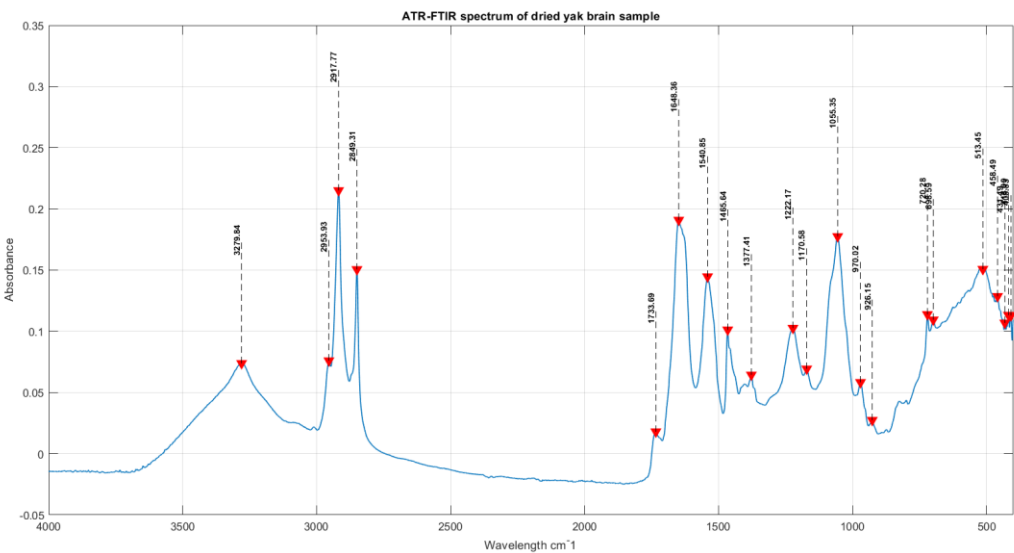


Fig. 1 ATR-FTIR spectrum of dried yak brain sample

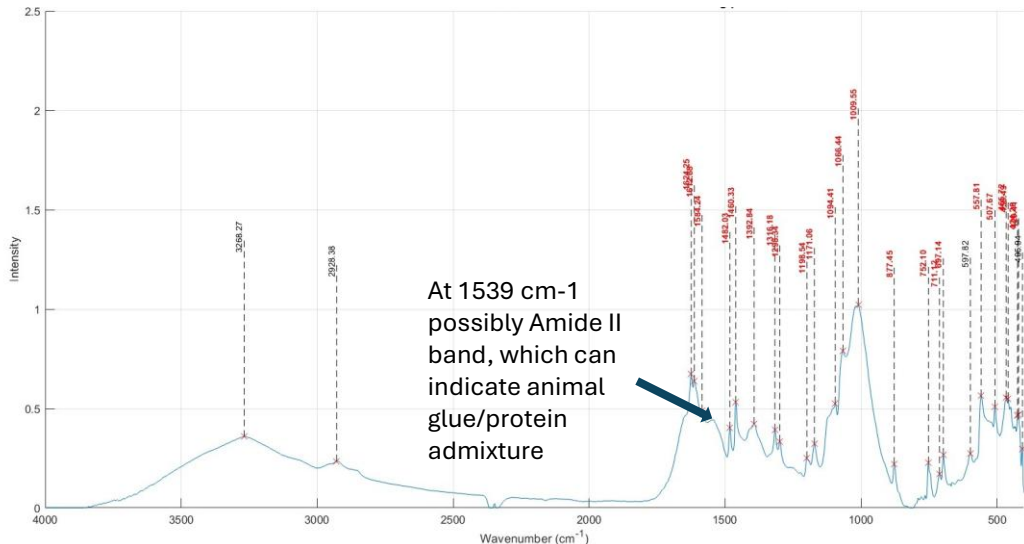


Fig. 2 ATR-FTIR spectrum of *thingshok* layer in folio 226a (vol. A)

The ATR-FTIR technique allows to identify the molecular composition of the sample based on IR radiation absorption of functional groups that exhibit change in dipol moment upon bond vibration. The analysis was performed both for the dried yak brain sample and for the glossy black areas on the folios. Apart from possible animal matter content, the glossy black areas contain as well significant amount of indigo dye, mixed with carbon black. Many of the IR-active bands in indigo overlap with bands characteristic for proteinaceous materials, therefore confident identification of the protein content should be approached carefully, however, the presence of an additional band at 1539 cm⁻¹ in the sample from the manuscript, may indicate amide II band vibrations and thus suggests possibility of animal matter content.

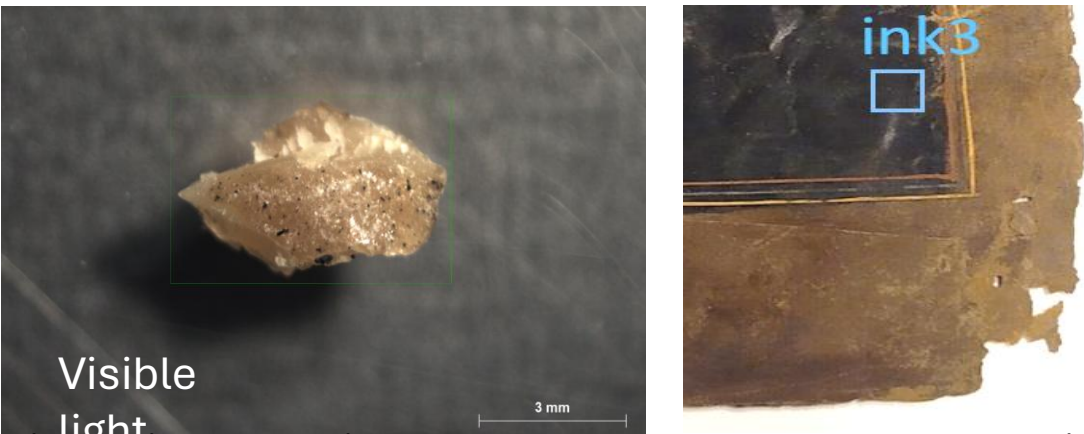


Fig.3 Dried yak brain sample (left) and measurement location on thingshok layer in one of the folios.

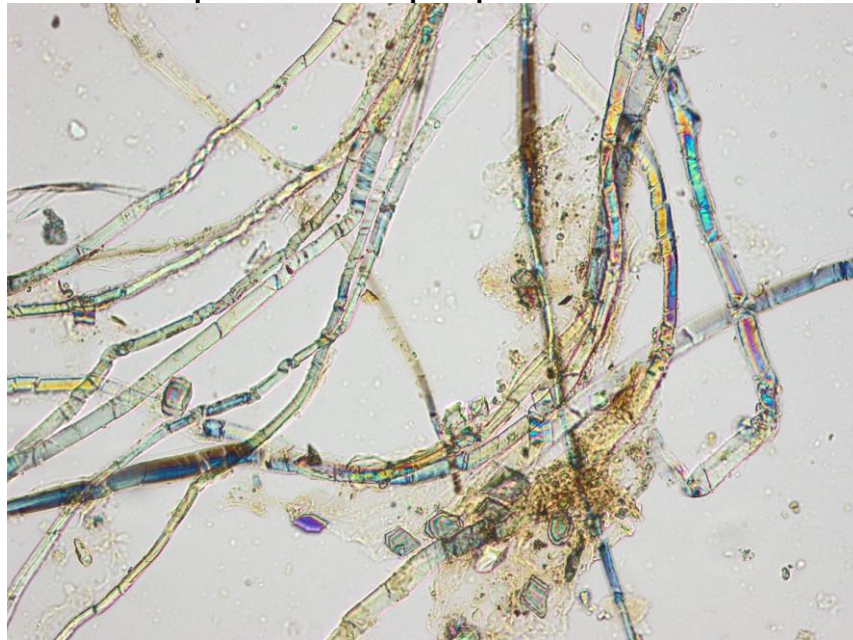
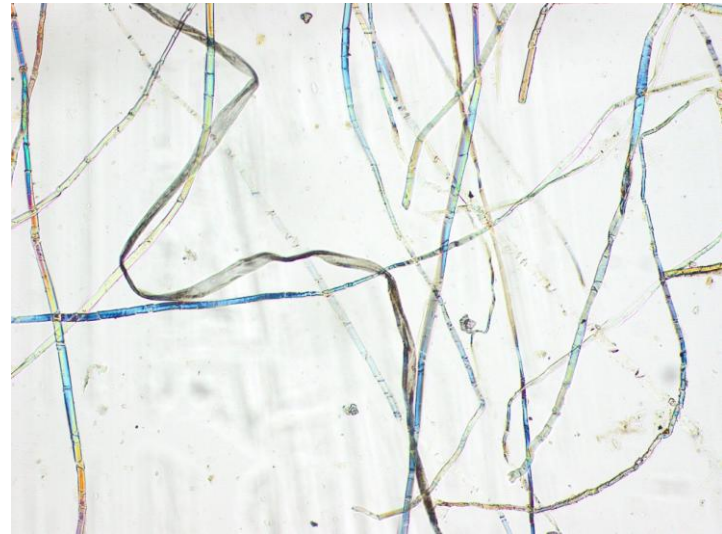
Microscopy and fibre analysis

Work in progress

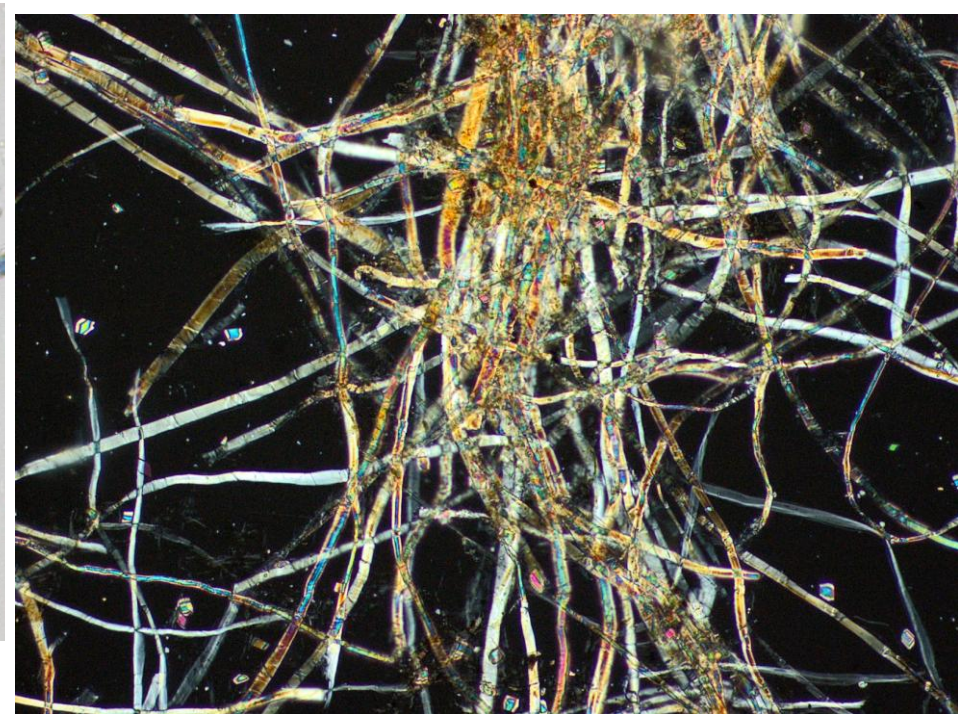
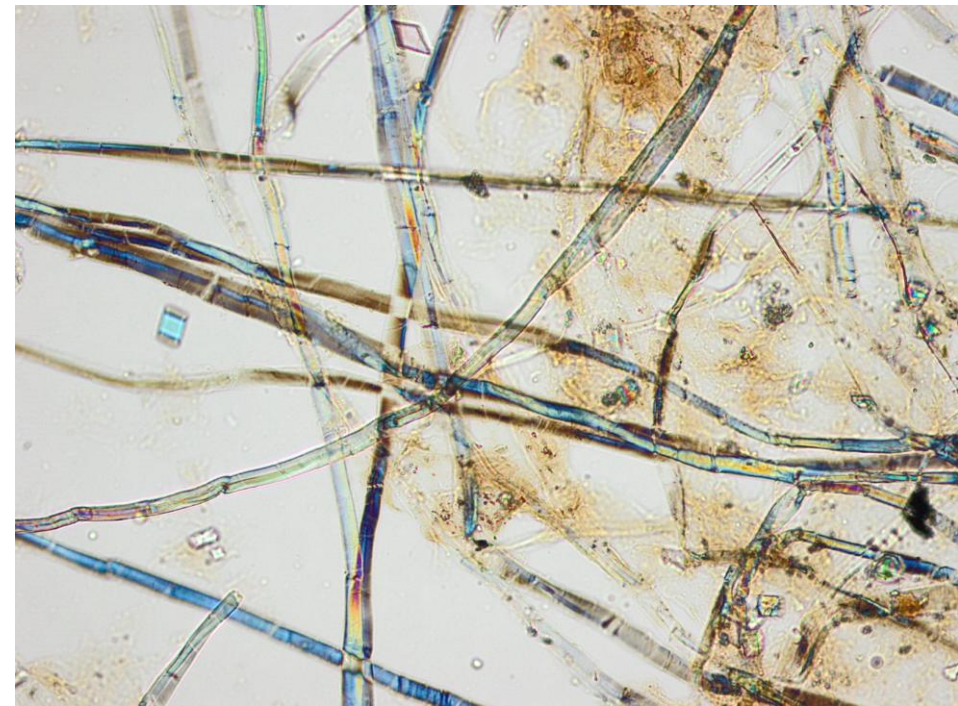
The fibres have some characteristic of Thymelaeaceae family plants but more precise identification requires further research

Addition of cotton fibres is confirmed

Crystals, glue and parenchyma tissue present in pulp

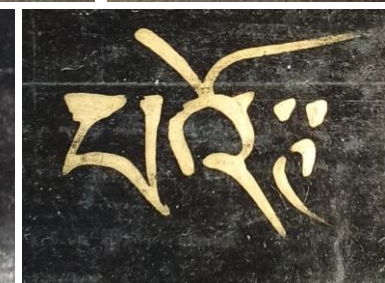
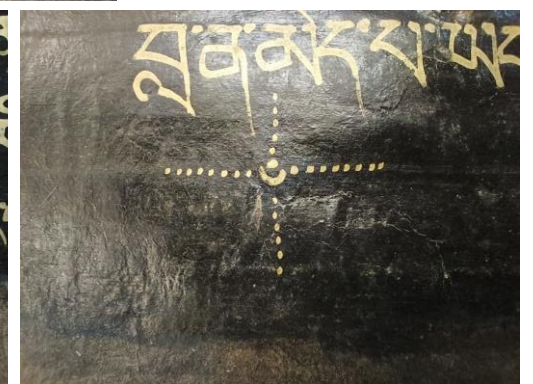
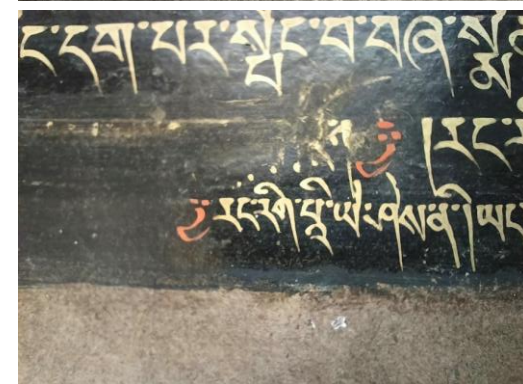
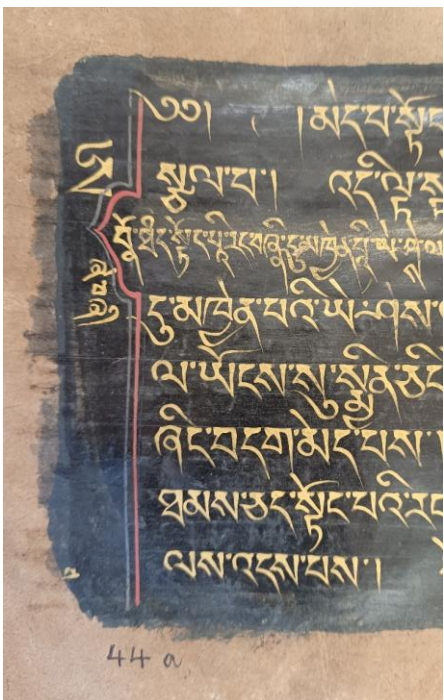
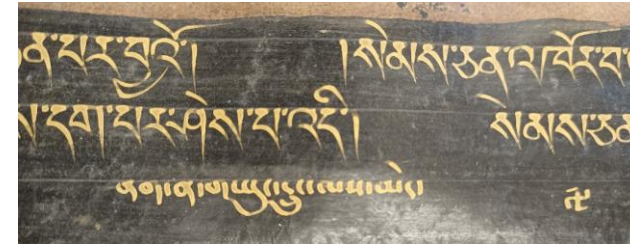
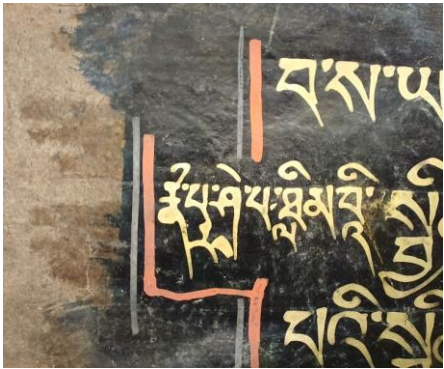
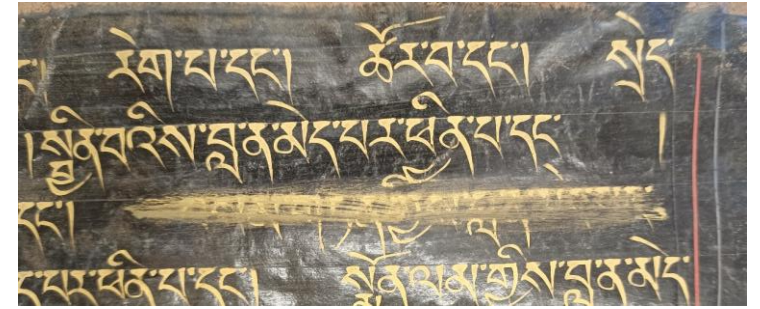
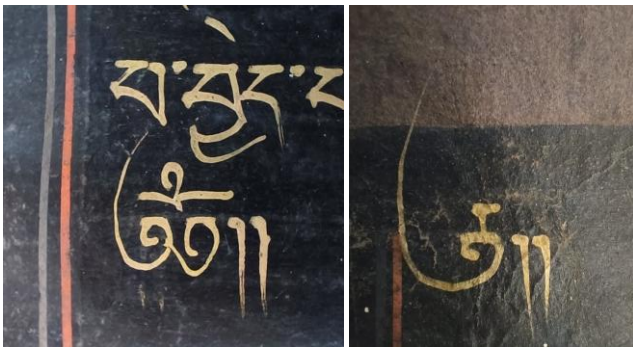


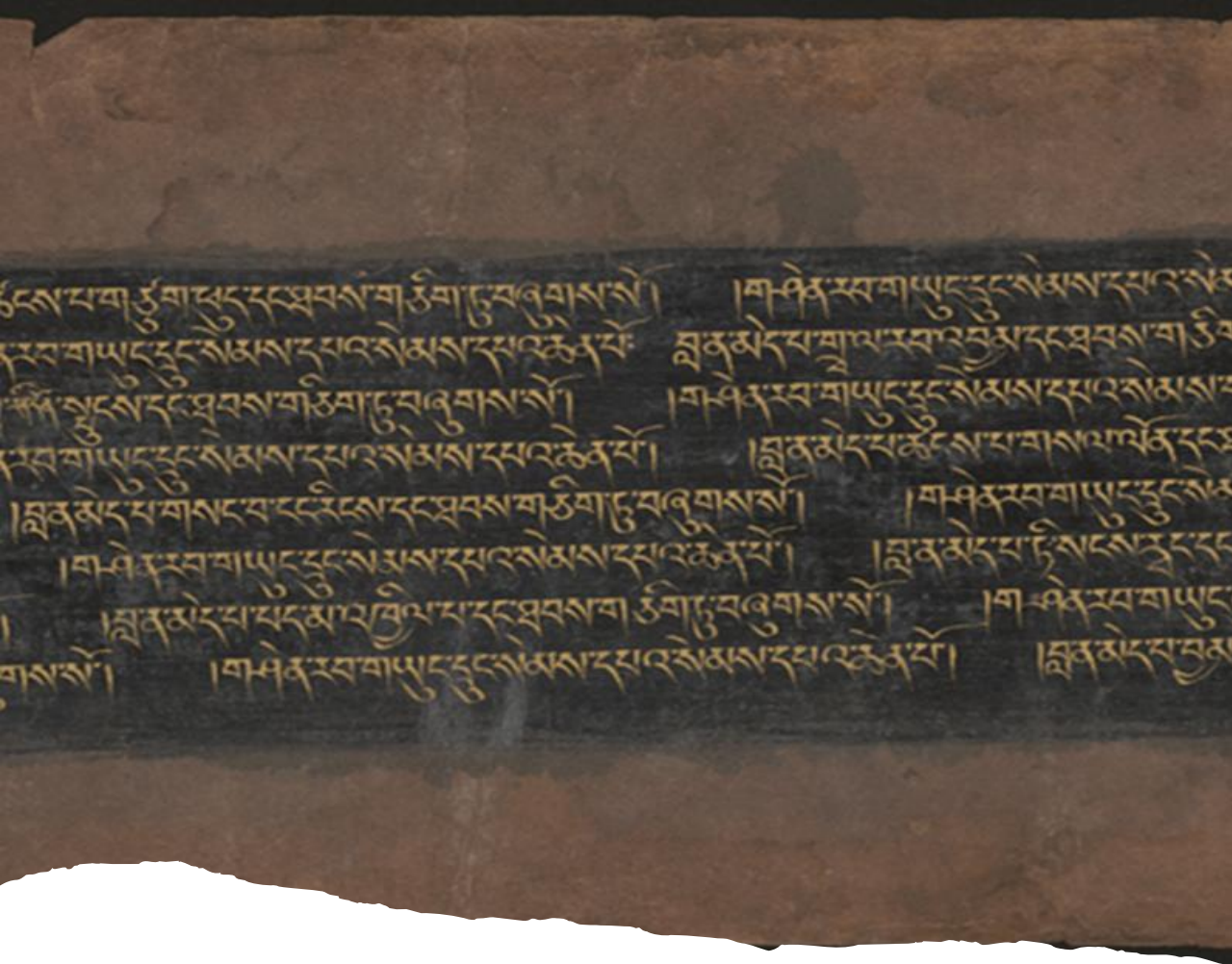
Vol. GA cover, cotton fibre



Scribal practices

- Erasures (with red ink lines, solvent removal, brackets)
- Insertions marks
- Corrections
- Various types of script (*dbu can* and *dbu med*)
- Adjusting the margins to the text
- Beginning marks
- Various *shad* marks





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folio 4-19

Khams Brgyad, vol. BA

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folio 4-105
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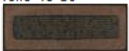
Appendix



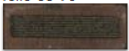
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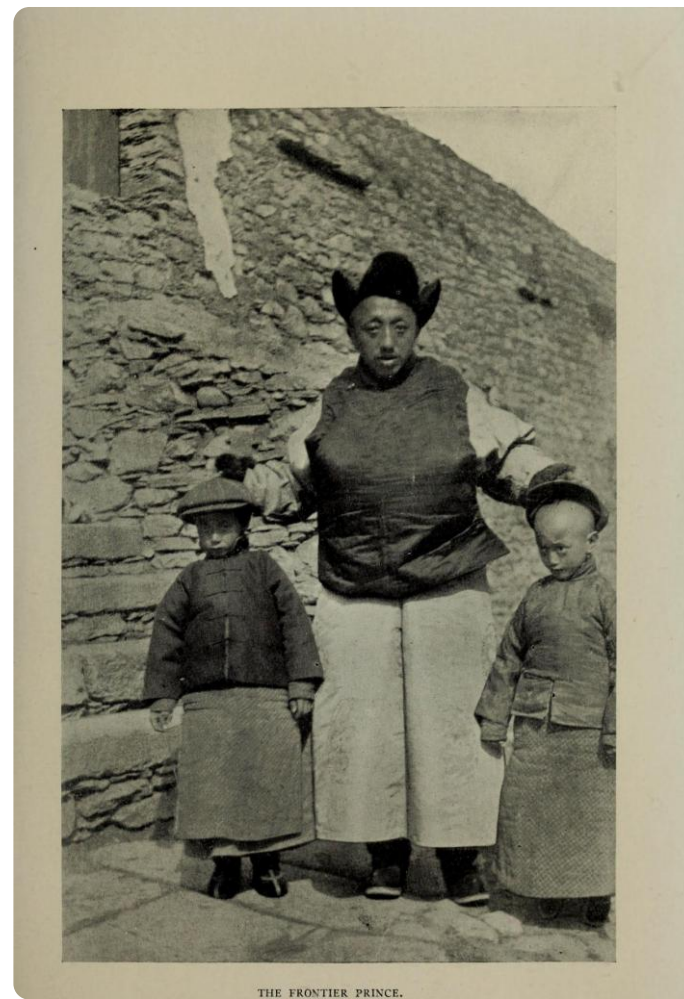
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THE FRONTIER PRINCE.

***But.... How old is the manuscript, really?
Who did the manuscript belong to?
Who was the last king of Chakla?
And where were the manuscript kept?***

汉藏之间的康定土司

清末民初末代明正土司人生史

Kangding Native Chieftains between
the Han Chinese and Tibetans

A Life History of the Last Mingzheng Tusi (1902-1922)

郑少雄 著



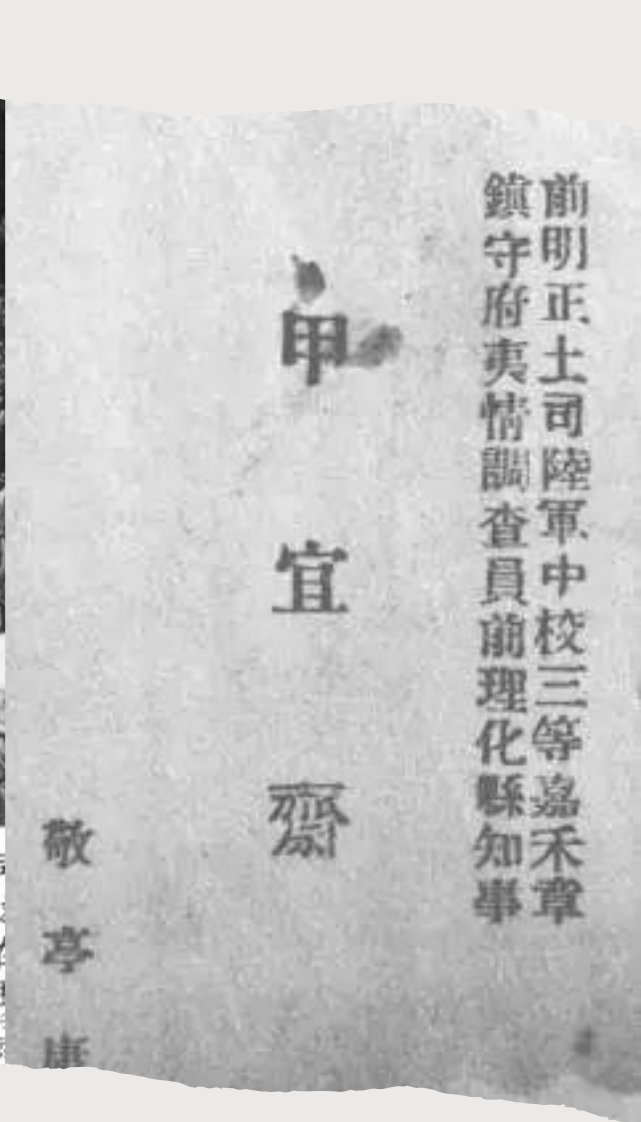
SDX & H-Y

SDX
&
H-Y

三联书店



民国时期的西康省政府，就建在明正土司衙门旧址上。其间还建有一“中山台”。当年的军政人员在“中山台”前集会。就在衙门的后面，还能见到老衙门的一段围墙。



- * Mingzheng tusi established in 1407
- * A known böñ stronghold

The last king of Chakla. Also known as Gjala Gjelpo, The Chala Chief, Gyeltsen Chömpel, Chakla Gyeltsen, 明正土司, 甲拉甲波, 甲宜齋(1869-1922)

- * Inherited the title in 1902, a very chaotic time.
- * Died fleeing from prison “like a stupid pig” (康巴周末2022年6月24日)

Where were the manuscript kept?



原明正土司在康定最恢宏的宫殿，《光明日报》（2012年12月30日）



1930年11月，康定地区的一处喇嘛寺庙

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Jingang temple

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