

Japan Foundation Asia Fellow
FY2016 (One-year Activity Report)

**Austronesian Dispersals
and the Spiritual Life of
Beaten Bark Paper**
- Looking at Indonesia and Vietnam



Prof. Isamu SAKAMOTO

- Senior Paper Conservator
- Japan Foundation Asia Center /
Grant Fellow

Indonesian study locations:

Jakarta Textile Museum (left),
National Library, Jakarta (right)

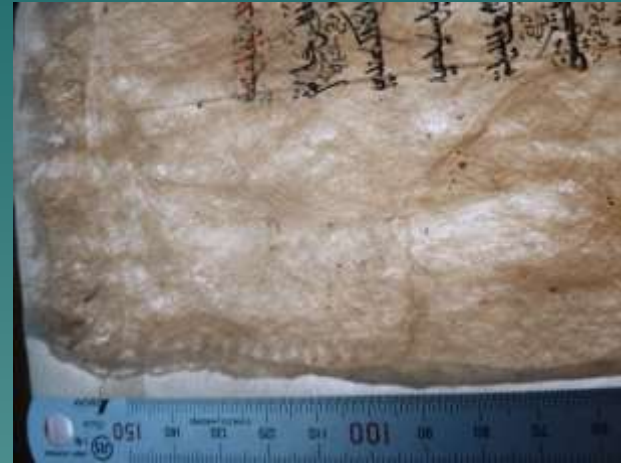


Page-by-page examination of 126 daluang manuscripts held by the National Library (1)
Refined fermentation of base material (paper mulberry fibers) indicated by a fused, transparent appearance

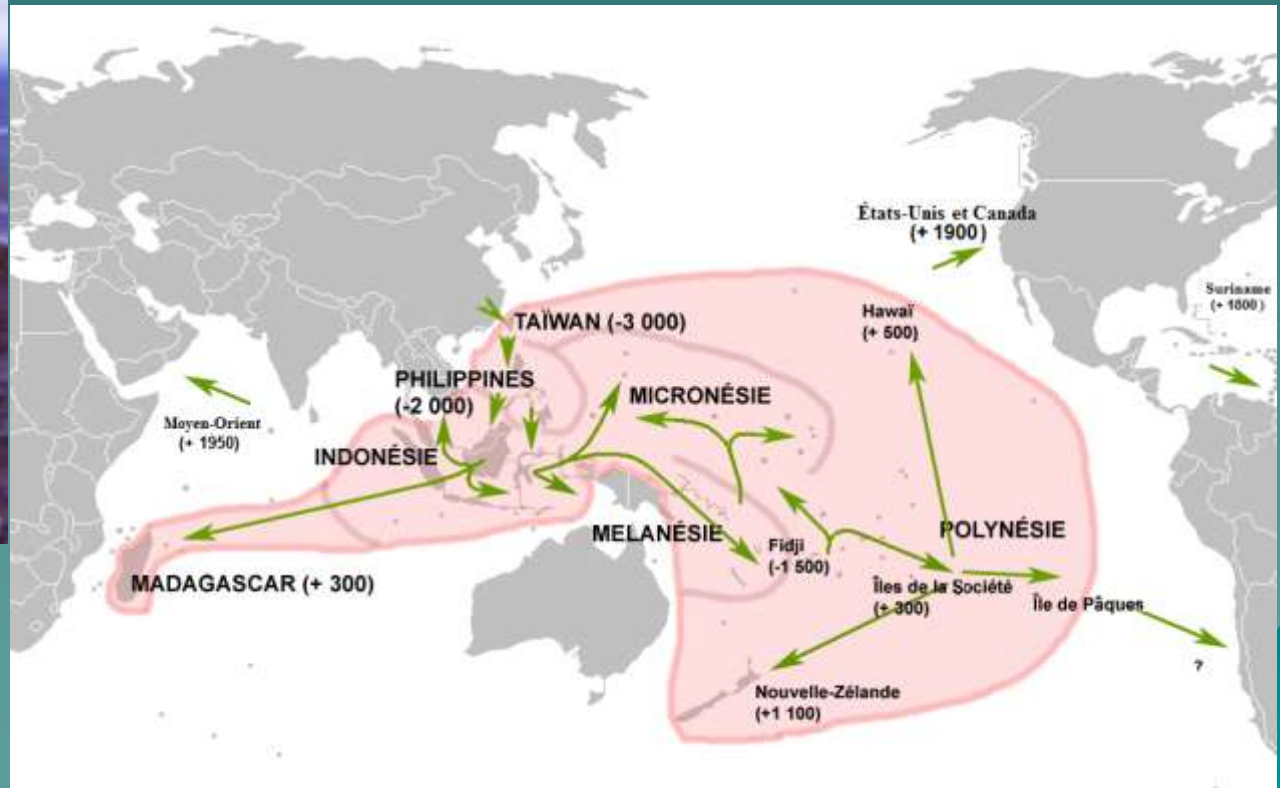
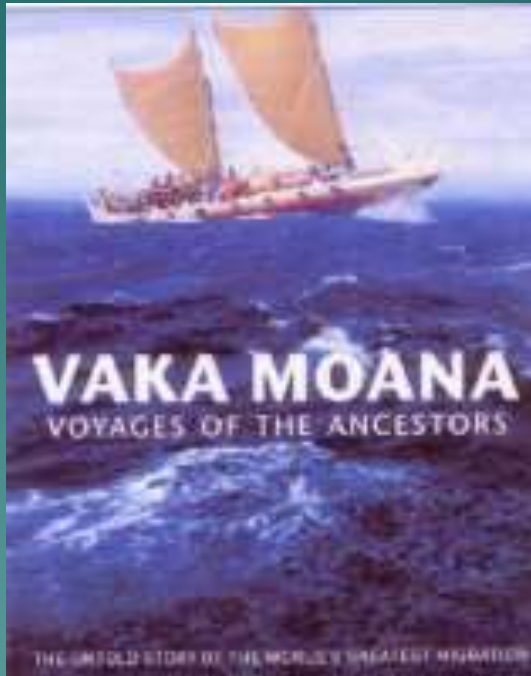


Page-by-page examination of 126 daluang manuscripts held by the National Library (2)

Lost production techniques: mystery of the 'dotted line'

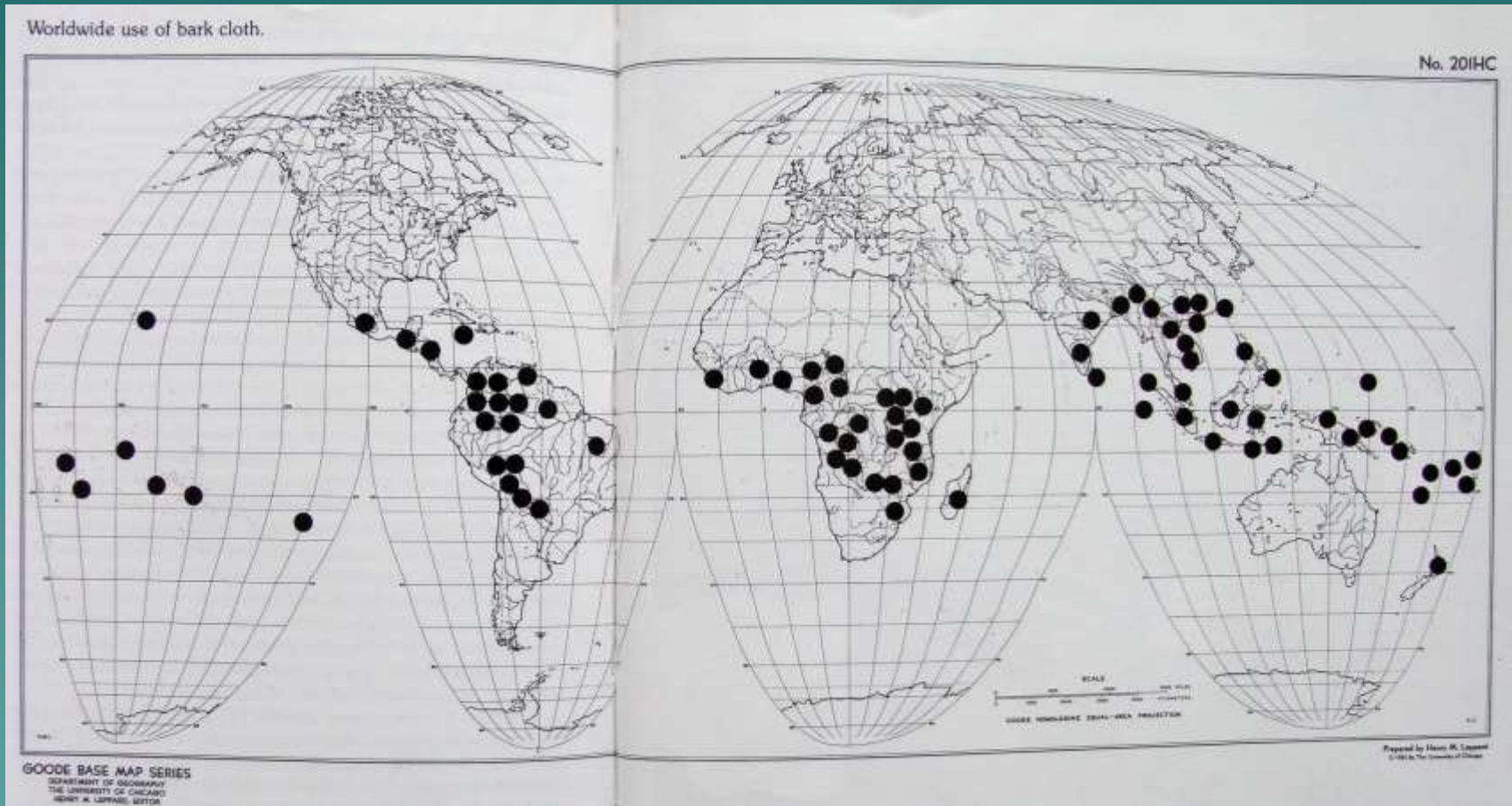


Diffusion Hypothesis: Voyages of Austronesian-speaking peoples

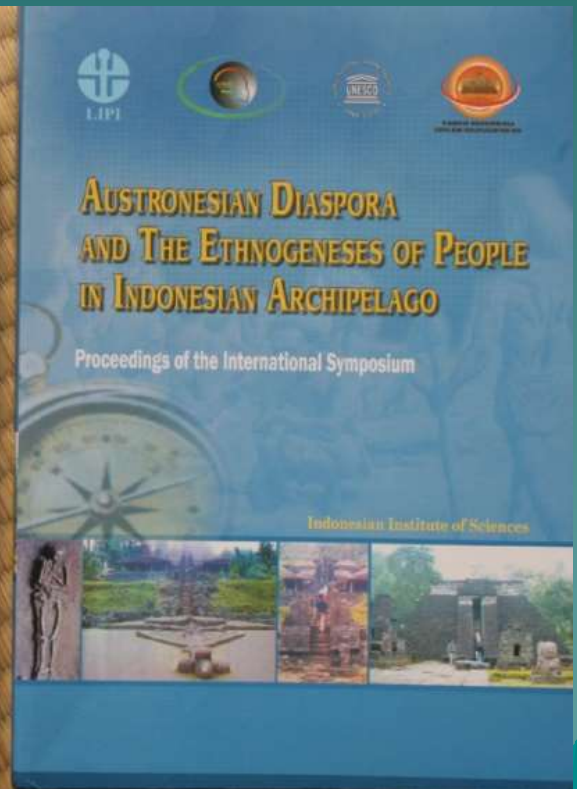
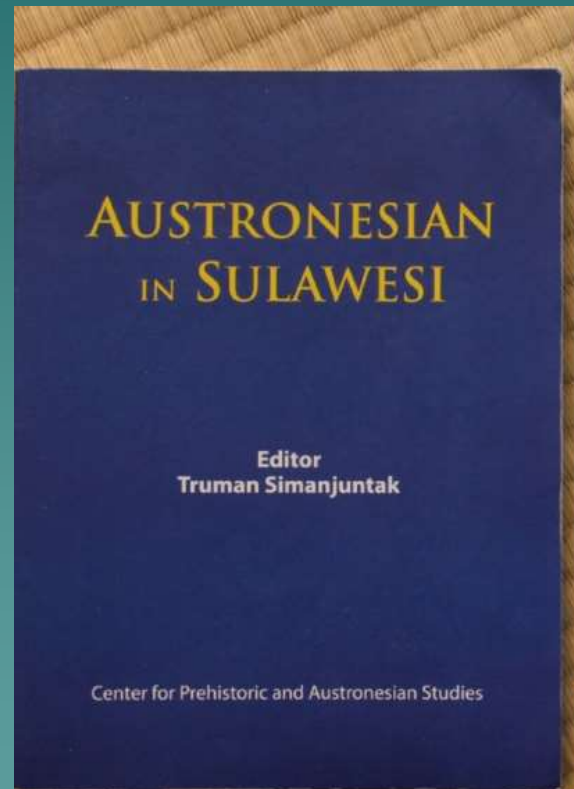
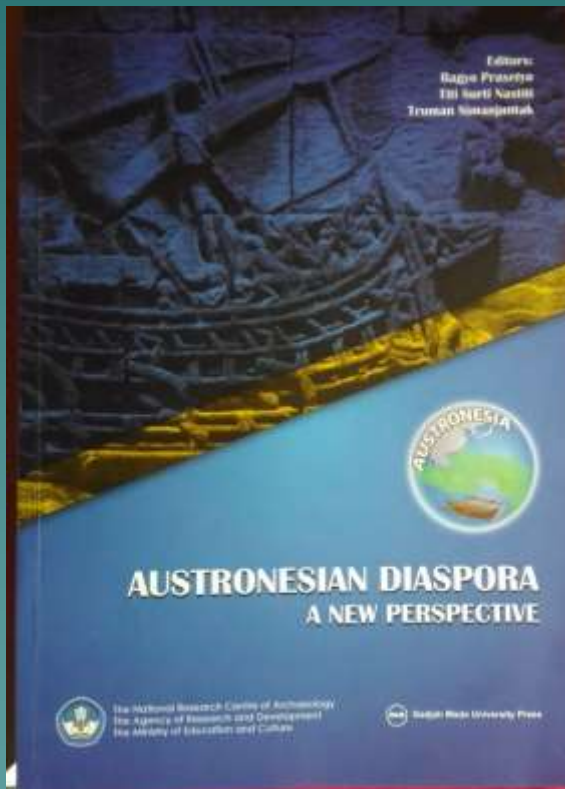


Diffusion of Beaten Bark culture

by Henry M. Leppard(edi.), 1961 The Univ. of Chicago



Austronesian studies published in Indonesia



Was Taiwan the original source of Austronesian speaking peoples?



環太平洋樹皮布相關名稱

1. 南島語 Tapa, Kapa
2. 台灣原住民
 - 布農族 Tapalankas (毡) · Tapah (被)
 - 泰族 Tapan (毡) · Tapacha (袴)
 - 鄒族 Tapa (毡) · Tapes (腰帶)
 - 卑南族 Tatuyus (頭巾)
 - 阿美族 Tarip (女用腰帶)
 - Tapir (袴) (太巴朗社)
 - Tapal (袴) (馬太鞍社)
- 賽夏族
 - Kapaskel (頭飾)
 - Kapataraya (男、女無袖短上衣)
 - Kapa-acai (腳飾)
3. 日本古語 Tahe, Tahu (楮拷布)
4. 中國古語 赫蟻 (Kiek diei), 鞮蟻, (樹皮布紙)
- 搨布、答布、都布、納布、賓布
- 都落布、嫁布、穀布、穀皮布、斑布、筒布
5. 墨西哥原住民語 Amate, Amatlé (樹皮布紙, 巫師用)

Lexical Comparison across the geographical range of Austronesian languages

(Beaten Bark related terminology >

| Location / Term | Sulawesi | Samoa | Tonga | Fiji | Cook Islands | Tahiti | Hawaii |
|-----------------|--------------|-------|-------|--------------|--------------|-----------|---------------|
| Beater | ike | i'e | ike | ike | ike | i'e | i'e, i'e kuku |
| Paper mulberry | bea, ivo | u'a | hiapo | masi, (malo) | aute | aute | wauke, waoke |
| Loincloth | pevo, (malo) | malo | malo | malo | maro | maro | malo |
| Number 'five' | lima | lima | nima | lima | rima | pae | elima |
| Bark cloth | fuya | siapo | ngatu | masi,(malo) | tapa | apaa,tapa | kapa |

Paper Mulberry

- The base Material for sacred Cloth and Paper

<Transportated in canoes which accompanying the Austronesian
language diffusion>

Middle : Fruit,
Upper right: Male flower,
Lower right: Female flower
All at Taitung, Taiwan



Paper mulberry (*Broussonetia papyrifera vent.*)

Pure white fibers of paper mulberry are suited to being beaten into sheets



Left: Central Sulawesi



Right: Jakarta Textile Museum

Daluang making (Dago, Bandung, Indonesia)



Fuya making in Central Sulawesi, Indonesia



Beaten Bark Culture in Indonesia

Fuya(C.Sulawesi), *Daluang*(Java), *Ulantaga*(Bali)



Daluang in Javanese Literature

RAMAYANA 9th century

1. The *Ramayana* contains the first report of *daluang* in old Javanese literature. According to Poerbatjakarta stems from the 9th century.

(...*Apa tan pasahaya tunga-tungal, daluwang wedihanya ruksa duhka, phalamulasana yumanan ganan, ikanan saksana yalahata denta...4,66*)

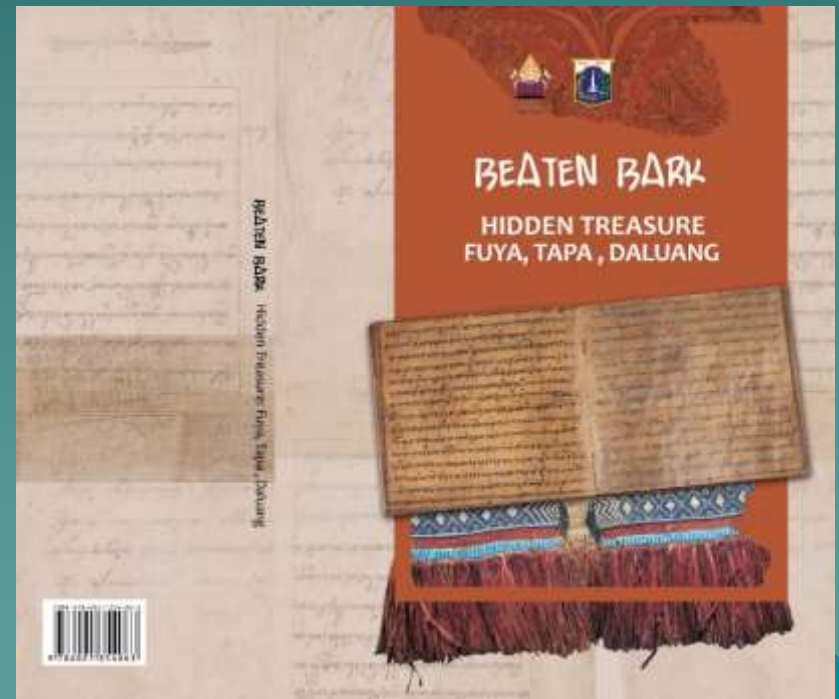
(*Ramayana* 5,66. 10,71)

2. *Bhoma Kawya* 1,27. 3,39. 12,4. 32,5.

3. *Sumanasantaka* 4,3. 29,2. 37,8. 42,15. 46,9.

4. *Rama Wijaya* 38,30. etc..

Exhibition Catalog, 2016
(Textile Museum Jakarta)



Daluang (name used mainly in Java)



Daluang Manuscript at Keraton Surakarta



Daluang Manuscript at Museum Radya pustaka



Lighting: **reflected light**



Lighting: **transmitted light**

Wayang Beber - early photographic records

Wayang bébér is the origin of Wayang world heritage



At house of Wahidin Soedirohoesoedo, Yogyakarta, 1902

Shadow picture scroll -Wayang Beber (Pacitan, East Java)



Wayang Beber has the highest quality
beaten bark paper in the world
(thickness 0.07mm, 4m long)



Transmitted light –wide view(left), close view(right)

Ulantaga (name used in Bali)



Fuya (name used in Central Sulawesi)



Each regional Beaters for beaten bark in Indonesia (Sakamoto collection)



World's oldest stone beaters discovered in Lignan, South China from ca. 7900 BP

by Dawei Li, Wei Wang, Feng Tian, Wei Liao, Christopher J. Bae.
The oldest bark cloth beater in southern China (Dingmo, Buling basin, Guangxi), 2014

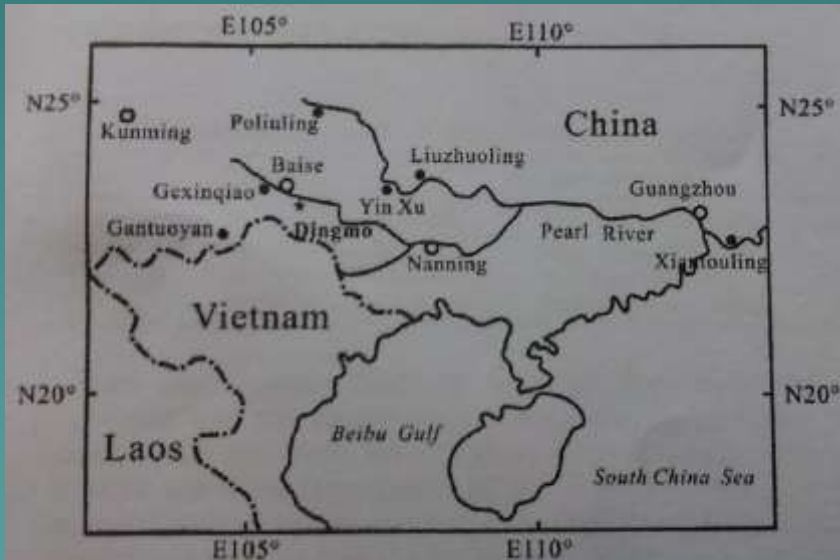


Fig. 1. Location of Dingmo Site.

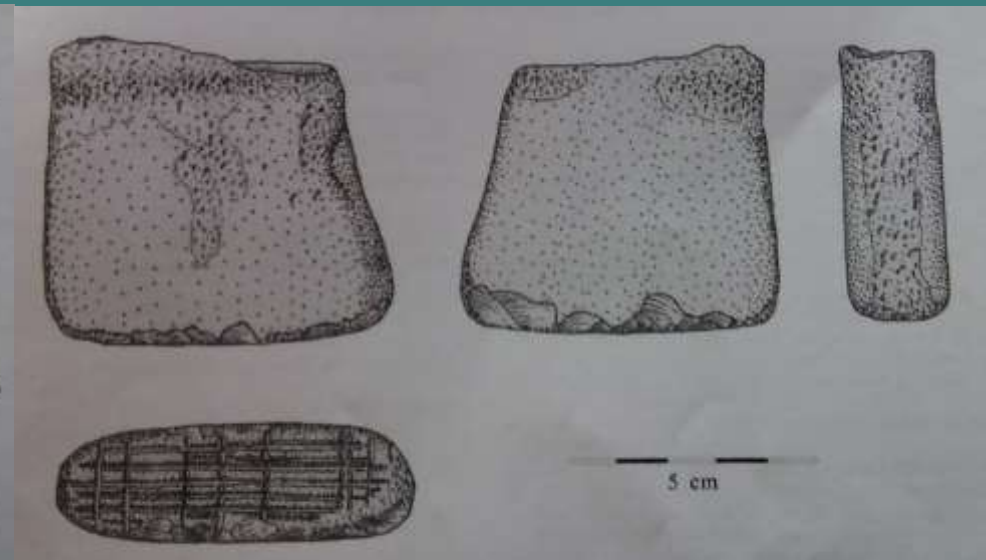


Fig. 6. Line drawing of the Dingmo bark cloth beater.

Ca trù & Golden Orchid Ceramics History Museum In Hanoi, Vietnam



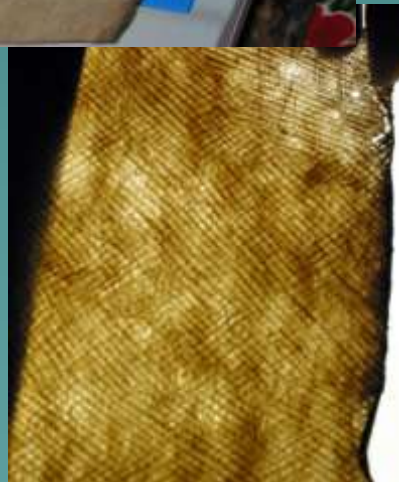
Hanoi University of Social Sciences and Humanities (Exhibition Hall and Nishimura Memorial Library)



Phu Toh Provincial Museum & Xom Ren archaeological site (Neolithic period)

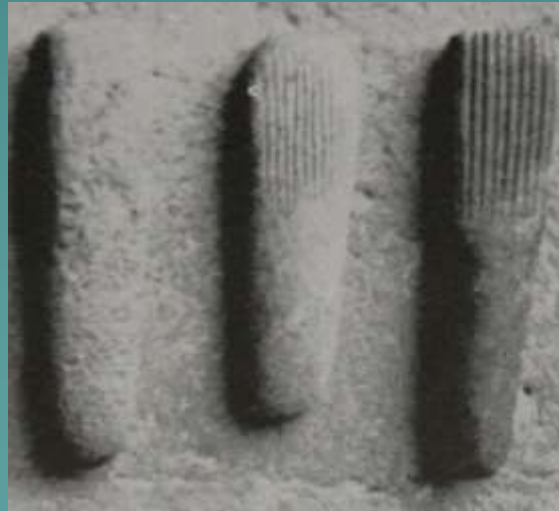
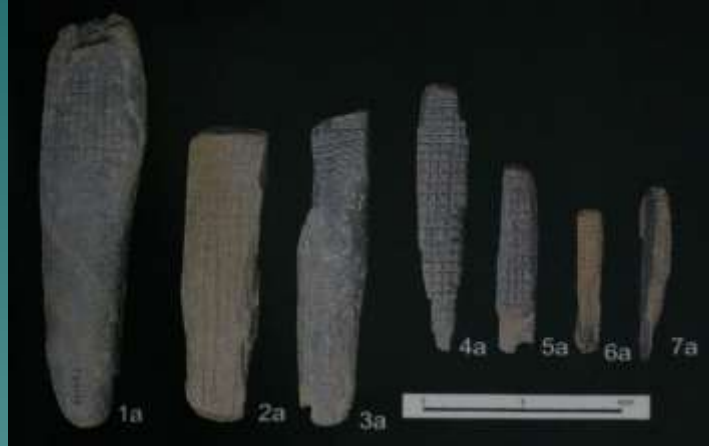


Beaten Bark paper manuscript found in Cham tribe village, Vietnam



Baton type beaters, Neolithic period

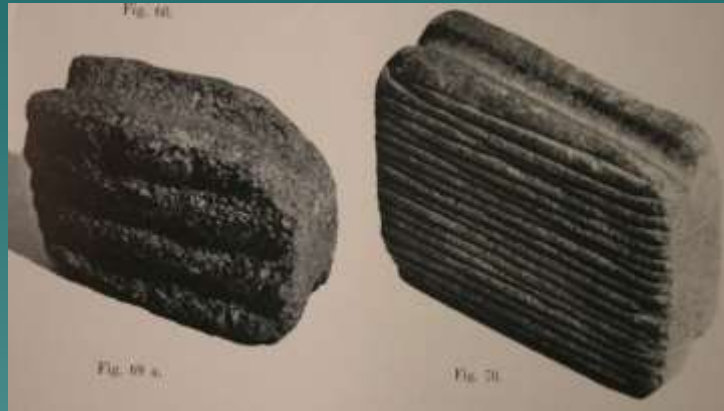
Upper: Taiwan (Left: ca.5000years B.P.),
Lower: Mexico



Racket type beaters

Upper: Mexico,

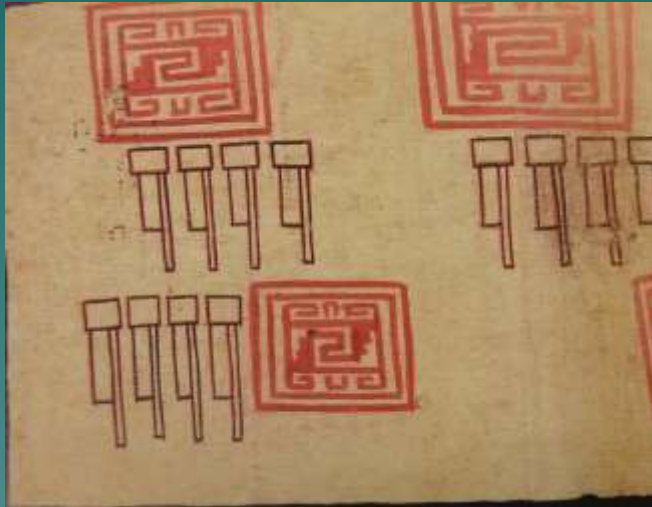
Lower: C. Sulawesi



Mexican beaten bark manuscripts (amate) 16th C.

Left: Library of Congress, USA

Right: Newberry Library



Trace of Beaten Bark Paper

Left : Yaxchilan site, Mexico AD709. Oct.28



Modern Mexican beaten bark paper(amate)

~Unlike ancient technique, beating process is incomplete.



Status of Megalithic era/ C.Sulawesi



World Journey to seek Beaten Bark Paper

☆1998.3

First visit National Library of Indonesia/Manuscripts Div.

☆2000.3 Visit Garut
(Observed Dluwang making)

☆2002.3 Vietnam (Found Beaten Bark Manuscript)

☆2006.7 Visit Pacitan and surveyed Wayang Beber
Produced video "Wayang Beber" (PHILIA-Japan, 20mins by Mr. Ibrahim)

☆2007.3 Taiwan

☆2007.5 & 8 Hawaii

☆2008.3 Canada, Mexico & USA

☆2008.7 Field research in C.Sulawesi

☆2012.5 Hong Kong & China

☆2012.6 Exhibition "Fuya" at Dharmawangsa Hotel

☆2013.3 Mexico

☆2014.8 Study tour to Bada organized by Jakarta Textile Museum

☆2016 One year JF Asia Center Grant program in Indonesia and Vietnam

Bibliography :

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- ◆ "Local Survey of the Historical Documents of Minority Groups in Central and Southern Vietnam" 2001
- ◆ *ACADEMIA*, No. 71 "Vietnam Champa Historical Manuscripts" 2001
- ◆ *Journal of Kibi International University, Department of Sociology*, No. 12 "Traditional Texts and Paper Making Technology of the Cham and Raglai People of Vietnam" 2002
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- ◆ *Nihon Keizai Shimbun*, 2009.9.4 morning edition (Culture Column), "A World Connected by Beaten Bark Paper"
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- ◆ *Eurasian Agricultural History Vol. 4*, "Reconsidering Sasuke Nakao's Tapa Theory on the Origins of Paper" 2009.10
- ◆ *BIOSTORY*, No. 12, "Beaten Bark Paper Culture and Austronesian Language Diffusion" 2009.12
- ◆ *Ethno-Arts*, No. 27, "Worldwide spread of Bark Cloth & Beaten Bark Paper techniques from the Neolithic Age" 2011.3
- ◆ LIXIL Booklet *EARLY CLOTH - Tapa and Felt*, "New Directions for Exploring the Origins of Cloth and Paper" 2017.9

Research team to Lore Lindu / C.Sulawesi (July 2008) Supported by NMP(Taiwan) & PHILIA(Kyoto)



Handmade paper-making technique (moulded paper)

Left: 澆紙技法 (pour method) Nepal...

Right: 抄紙技法 (dip method) Japan...



Watermarking in modern paper

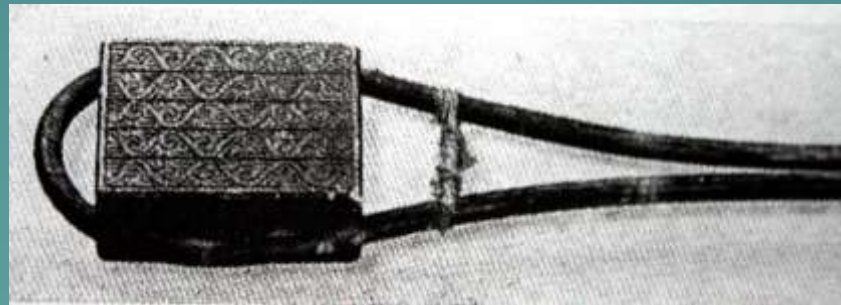
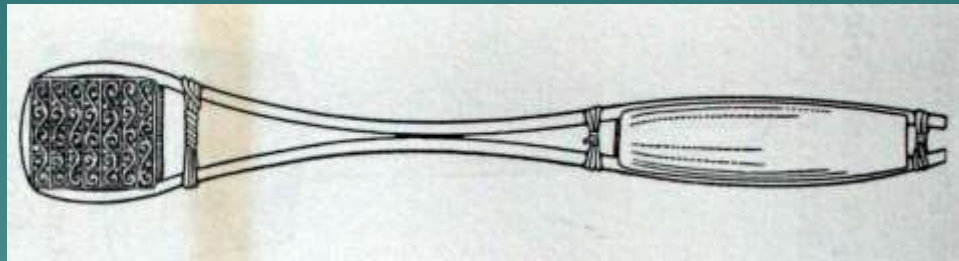


Water-mark motif for bark cloth

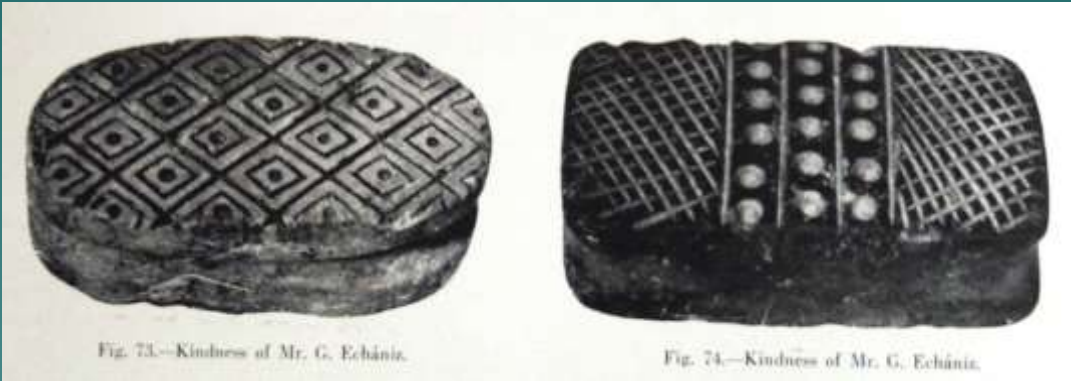
Bada valley, Central Sulawesi



Bark-cloth Stone Beaters with water-mark motif Central Sulawesi, Indonesia



Bark-cloth Stone Beaters with water-mark motif Mexico



Stone beaters for making water-mark

China·Baojing Bay site
(ca.4,000B.P)



Mexico·Maya site
(8th C.)



Special motifs

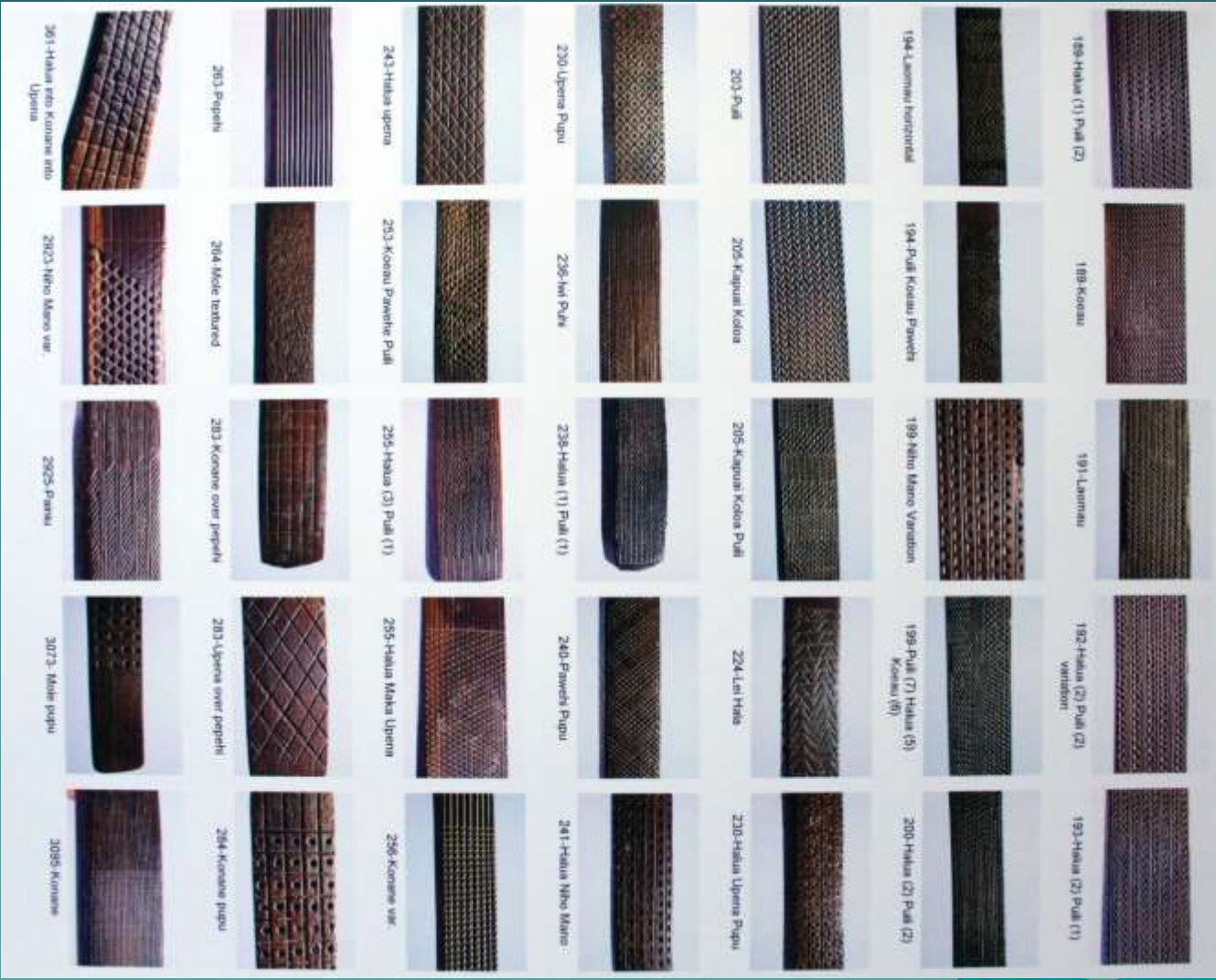
Upper left: Templo Mayor,
Lower left: C.Sulawesi,

Upper right: C.Sulawesi
Lower right: Yunnan



Beaters used for imprinting watermarks

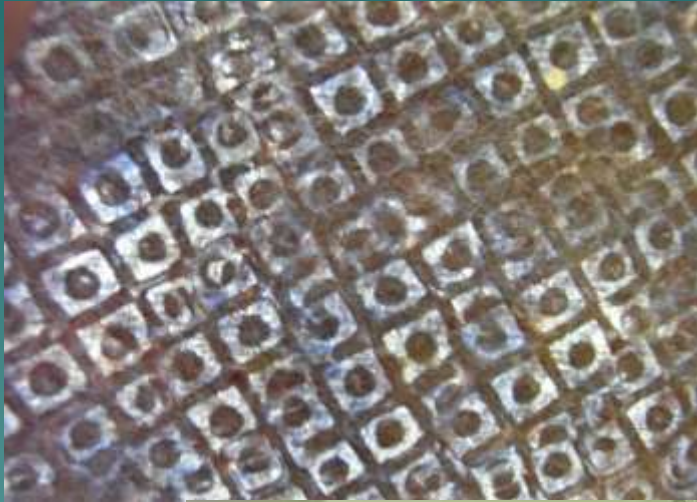
(Bishop Museum, Hawaii)



Beautiful Hawaiian bark cloth (*kapa*)
with imprinted watermarks
Upena Pupu(Hawaii)



Appearance of Hawaiian bark cloth made using sophisticated techniques (Bishop Museum, Hawaii)



DNA Analysis of Material Plants

Paper Mulberry (*Broussonetia Papyrifera vent....*)

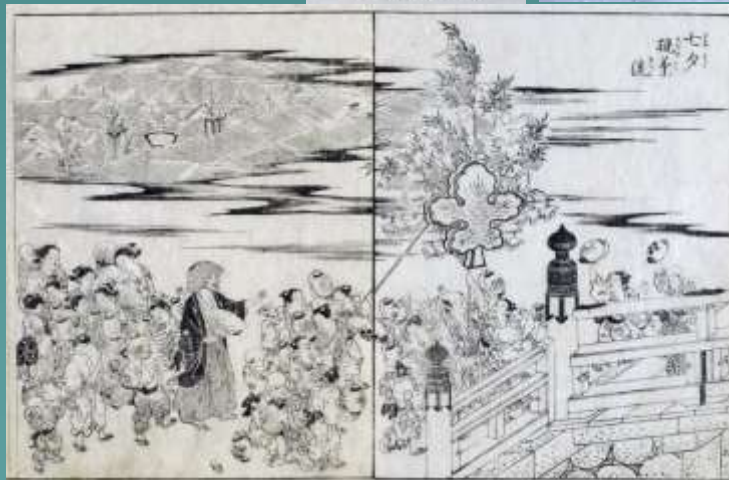
rpl14-rpl16領域における塩基置換

| サンプル番号 | サンプル名 | 採取地 | 28 | 142 | 245 | 310 | 365 | 395 | 413 | 417 | 434 | 448 | 450 | 452 | 454 | 468 | 469 | 477 | 479 | 481 | 488 | 492 | 495 | 500 | 503 | グループ | |
|--------|------------------|------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----|
| 1 | Malo1 | C.Sulawesi | C | T | A | C | G | A | G | T | 12T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | I | |
| 2 | Malo2 | C.Sulawesi | C | T | A | C | G | A | G | T | 12T | A | T | - | T | A | T | C | G | T | T | T | A | A | A | T | II |
| 3 | Paper Mulberry3 | C.Sulawesi | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 4 | Paper Mulberry4 | C.Sulawesi | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 5 | Paper Mulberry5 | C.Sulawesi | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 6 | Paper Mulberry6 | Jawa Garut | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 7 | Paper Mulberry7 | Jawa Garut | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 8 | Paper Mulberry8 | 台湾 台東 | T | T | C | C | G | A | G | T | 11T | A | T | - | T | A | T | C | A | T | T | A | A | A | T | IV | |
| 9 | Paper Mulberry9 | 台湾 台東 | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | V | |
| 10 | Paper Mulberry10 | 台湾 台東 | T | T | C | C | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 11 | Paper Mulberry11 | 台湾 台東 | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 12 | Paper Mulberry12 | 台湾 台東 | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 13 | Paper Mulberry13 | 台湾 台東 | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 14 | Paper Mulberry14 | 台湾 台東 | T | T | C | A | G | A | G | T | 11T | A | T | - | T | A | T | C | G | T | T | A | A | A | T | III | |
| 15 | Paper Mulberry15 | 台湾 台北 | T | T | C | A | G | A | G | T | 12T | A | T | - | T | A | T | C | A | T | T | T | A | A | T | VI | |
| 16 | カジノキ1 | 京都 白峯 | T | T | C | C | G | A | G | T | 12T | A | T | - | T | A | T | C | G | T | T | T | A | A | T | VII | |
| 17 | カジノキ2 | 京都 宗像 | T | T | C | C | G | A | G | T | 12T | A | T | - | T | A | T | C | A | T | T | T | A | A | T | VII | |
| 18 | カジノキ4 | 京都北園 | T | T | C | C | G | A | G | T | 12T | A | T | - | T | A | T | C | G | T | T | T | A | A | T | VII | |
| 19 | カジノキ5 | 東京新宿 | T | T | C | A | G | A | G | T | 14T | - | T | - | C | A | T | A | A | T | T | T | A | C | T | IX | |
| 20 | カジノキ7 | 東京五日市 | C | C | A | C | A | - | T | - | 13T | - | C | G | C | T | G | C | A | T | T | T | T | C | T | X | |
| 21 | コウゾ11 | 岩手宮古 | C | C | A | C | A | - | T | T | 14T | - | C | G | C | T | G | C | A | A | G | T | T | C | C | XI | |
| 22 | コウゾ14 | 岩手花巻 | C | C | A | C | A | - | T | T | 14T | - | C | G | C | T | G | C | A | A | G | T | T | C | C | XI | |
| 23 | コウゾ17 | 岩手岩泉 | C | C | A | C | A | - | T | T | 14T | - | C | G | C | T | G | C | A | A | G | T | T | C | C | XI | |
| 24 | ヒメコウゾ8 | 東京青梅和 | C | C | A | C | A | - | T | T | 14T | - | C | G | C | T | G | C | A | A | G | T | T | C | C | XII | |
| 25 | ヒメコウゾ9 | 東京青梅和 | C | C | A | C | A | - | T | T | 14T | - | C | G | C | T | G | C | A | A | G | T | T | C | C | XII | |
| 26 | ヒメコウゾ10 | 東京青梅和 | C | C | A | C | A | - | T | T | 14T | A | C | G | C | T | G | C | A | A | G | T | T | C | C | XIII | |

Remnants of paper mulberry in Japanese folkways

Top: Suwa Grand Shrine Emblem

Lower left: Image of Kyoto (Edo Era), Lower right: Kikkoten Festival



Physical condition of Original Wayang Beber

~The state of original Wayang Beber scrolls is very critical with weakening caused by high humidity and damage caused by years of use !!

Gunung Kidul (2017)




Pacitan (2006)



Wayang Beber project on Java 2016 and 2017 by Croatian anthropologists (Tea Skrinjaric & Marina Pretkovic)



OPENING OF THE EXHIBITION



Lost and found:
INDONESIAN
PICTURE SCROLL THEATRE

25th January 2017 - 2nd April 2017

We have the pleasure of inviting you to the opening of our
THEATRE in the Ethnographic museum in Zagreb, on Wed

The image shows a poster for an exhibition. The top part has the text "OPENING OF THE EXHIBITION" in a serif font. Below that is a circular logo with a decorative design. The main title "Lost and found: INDONESIAN PICTURE SCROLL THEATRE" is centered in a mix of white and orange fonts. Below the title, the dates "25th January 2017 - 2nd April 2017" are printed in a smaller white font. The bottom part of the poster features a decorative border with traditional Indonesian motifs and a partial view of a Wayang Beber figure. The text at the bottom is partially cut off.

Revitalization project for traditional bark-cloth costume

Bulili, Bada Valley, Indonesia 2011





terima kasih



Acknowledgments

The investigation, research and support activities of this year-long project were made possible thanks to the Fellowship Grant provided by the Japan Foundation Asia Center. I am sincerely grateful for their generosity.