



Museum of Domestic  
Design & Architecture

# MoDA katagami stencils general background notes

These research notes were compiled by Alice Humphrey (ULITA, Leeds University), for the Museum of Domestic Design and Architecture, in May 2014. They provide a technical analysis of the katagami in MODA's collection and a comparison with those held at ULITA.

The katagami collection at MoDA consists of: stencils for repeat patterning of clothing fabric (about half the collection):

K2.17



K2.63



There are also a number of larger, non-repeating designs (roughly 50), and square individual plant motifs (approx 150). It has been suggested that these were produced for the Western market:

K8.36



K7.30



There are also offprints from most of the stencils, and some offprints without matching stencils.

Katagami stencils are mostly resist printed using rice paste through the stencil then dyeing the cloth usually with indigo therefore in many cases, the offprints represent the negative image of the finished design. In contemporary practice, dyes are sometimes painted through the stencil to produce multicoloured designs from a single stencil. However, dyes were introduced by late nineteenth century which could be mixed into the paste and applied directly to the stencil (the ?Western market stencils are probably direct-dyed through the stencil).

The stencils are made of paper made from inner bark of the paper mulberry tree. The paper used in stencils was sometimes recycled from old ledgers. In stencil production, the paper is tanned with smoke or persimmon juice to make it stronger and waterproof, though this process also makes the paper more brittle in the long-term hence the breaking around the edge of some of the stencils.

### **Domestic market stencils**

The stencils for patterning clothing fabric are of three size classes: sansun okuri, koban and chūban. All stencils are roughly the same width – 36 cm the standard width of fabric, sansun okuri have the shortest repeat length (around 11cm), koban have a repeat length around 15cm. Chūban have a repeat length of around 20-22cm, they were introduced when stencil printed fabric increased in popularity to speed up production. Several of the MoDA stencils do not fit within the repeat length ranges given by Kuo (1998, p.95), the stencils in the ULITA collection show similar disparity with Kuo's size classes so this may just reflect variation possibly for convenience of the pattern size or even paper size given that it is recycled.

Because cloth in Japanese clothing runs over the front and back with no shoulder seam, the patterning runs in both directions on stencils designed for clothing fabric use (occasionally stencils repeat both

horizontally and vertically, though none of this type were noted in MoDA's collection). Stencils of a type larger than chūban tended to be used for gift wrapping cloths, towels, banners or shop signs and to have non-repeating designs orientated in a single direction.

## Motifs

K2.36 Chinese flower (karahana) and blossom



K2.45 chrysanthemum



K2.51 orchid



K2.50



The stencils feature a high number of plant and, particularly, flower

motifs which may well represent the selection preferences of the Silver Studio or the dealers they bought from.



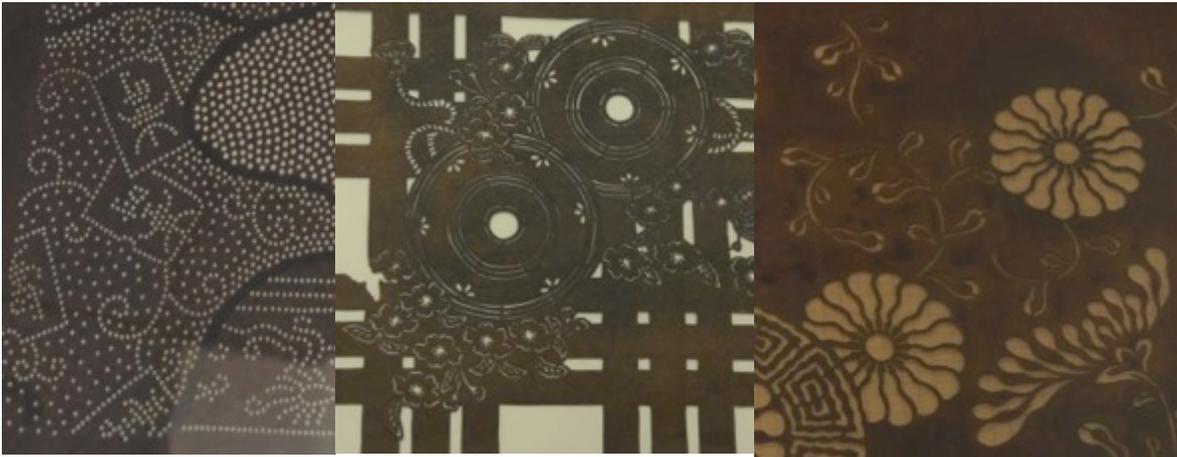
MoDA's collection appears to have a relatively low representation of motifs that were common in Japan but not readily meaningful to a Western market such as the Seven Treasures (K4.9 above) which are common in the representation of costume in prints.



There is also a low representation of narrative stencils representing Japanese folk stories and usually also with an auspicious connotation. The example above (K2.5) includes a cockerel sitting on a drum which is associated with a Chinese emperor who ruled wisely and peacefully, so drums for warning of approaching enemies became overgrown and used as a perch by cockerels. Only one other stencil in the MoDA collection has a currently identified narrative association – K3.28 representing the story of Urashima Taro (see catalogue record).

The meaning of the motifs on the stencils varies according to motif combination e.g. peonies may be a summer flower or, combined with a Chinese lion may represent power and the elite. Meaning also varies according to context – distribution of patterning on the garment may e.g. differentiate between clothing for a married or unmarried woman; colour also plays a part in interpretation, both of which create problems in identifying garment type and gender from stencils so all the general points below need to be considered with caution.

## Status



In reference to status, some of the stencils have imagery associated with elite or classical culture such as poem cards (K7.49) and musical instruments (K2.39 drums). The 16-petalled chrysanthemum (present on stencils K2.110, K3.1 and K3.17) is interesting – one representation of the 16-petalled chrysanthemum is used as the imperial crest and variants on this were used by other members of the ruling family; as a government emblem (e.g. on passports) and with an association to Shinto so possibly these designs were for a civil servant's or priest's clothing although, by the late nineteenth century, restrictions on mon (crests) were more relaxed so it may be that general populace would have been permitted to use this motif.

Stencilling could be used for high status garments but embroidery, hand painting and possibly tie-dye seem to have been more common techniques for the highest status garments. There is no evidence in the MoDA collection of the idiosyncratic everyday imagery (e.g. tools, household items) which were adopted as crests or decorative patterning by merchants and rural populations – quite likely to be a product of Western selection.

## Seasons





Broadly speaking, the stencils seem to be dominated by autumnal motifs, K2.43 with hares (associated with the moon and therefore with Autumn and 'Autumn grasses') provides a good example of Autumn imagery. Snowflakes and 'puffed' sparrows (i.e. feathers fluffed up) are common Winter motifs. Cherry blossom (e.g. K1.18 and see catalogue for others) is a classic late Spring motif and Summer is mostly represented in the collection by wisteria (e.g. K1.2) also by mandarin orange (K2.41 above).

## Gender

The representation of patterning in prints showing Japanese costume make it difficult to identify a definite gender split in imagery. In broad terms, the high presence of flowers means that the majority of stencils in this collection are probably for women's clothing although some flowers e.g. peonies and chrysanthemums are gender neutral in Japanese culture, or the gender may be set by the colour in which the design is printed.

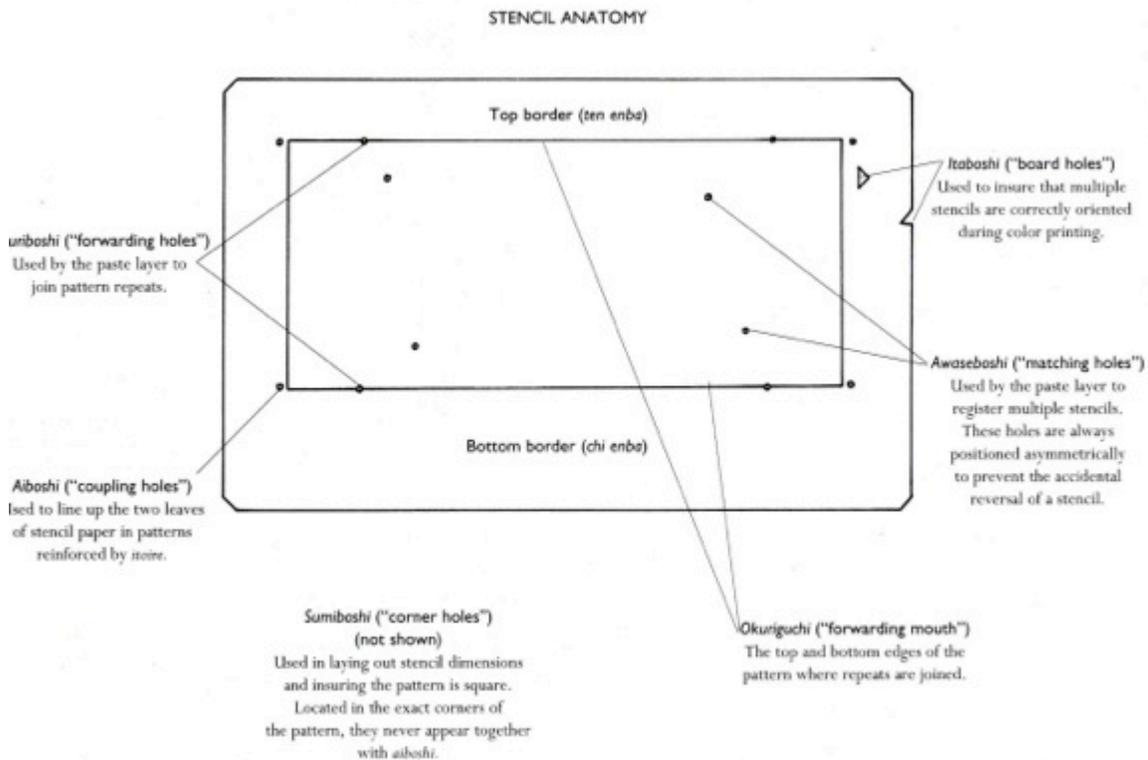


Typical imagery men's clothing is motifs more related to natural forces e.g. lightning, clouds, rough water. Stencils from MoDA's collection which may be for men's costume include K3.19 (left) – both dragons and war fans are male associated motifs and, possibly, K2.85 (though examples of 'rough water' are also found on women's costume).

#### Incidental notes about motif names

'Autumn Grasses' and 'Spring Grasses' are conventional terms for groups of classic seasonal plants only one of them is actually a grass. The Autumn grasses are bell flower, miscanthus, kudzu, bush clover, eastern valerian, boneset *Eupatorium fortunei* and carnation. The Spring Grasses (also associated with New Year, which fell in Spring in the lunar calendar) are turnip, radish, shepherd's purse, Japanese parsley (water dropwort), cudweed, nipplewort and chickweed. The 'hollyhock' is another eccentricity of English terminology in that the plant known as 'hollyhock' in Japanese decoration is actually *Asarum caulescens* not hollyhock – the confusion has arisen due to a similarity in the Japanese name for hollyhock and *A.caulescens* so the, common, hollyhock leaf motif (crest of the Tokugawa clan) doesn't resemble a real hollyhock leaf.

## Stencil structure



from Kuo (1998 p.98)

Some stencil printed designs used two or more stencils to complete the finished pattern either to hide supporting structures used in stencils with large resisted areas or to apply patterning in more than one colour. Two types of registration marks are used on the stencils – those for adding detail or hiding tie bars in a complex pattern – small dots, positioned asymmetrically to ensure correct orientation and those for creating multi-coloured designs cut in or near the margin of the stencil. This collection seems relatively unusual in having full sets of stencils available for several of the multi-stencil designs.



tie bars on K2.71 mesh support K2.12 stitched support on K1.24

As well as paper tie bars, supporting structures for the stencils could be created with silk mesh; the design would be cut into several stacked sheets of paper and these glued together as pairs with the mesh sandwiched between the pages. Stitched support is used to hold the central rings in place on K1.24 and also used on other stencils in the collection to repair them.

### Cutting techniques

Five main techniques are used in stencil cutting – draw cutting (hikibori) with the blade drawn towards the body is the main contemporary technique but was traditionally used for cutting fine stripe patterns. Thrust cutting (tsukibori), where the blade is held facing away from the body with the paper manipulated around the blade and a saw-like action working through a hole in the board is used for cutting. It is not clear whether hikibori was used exclusively for stripes or when it took over from tsukibori so either one of these techniques may have been used for the elaborate representational designs in the collection. Chisel cutting (ichimaizuki) may be used for cutting lattice patterns. Small repeating designs may be knife cut or cut with an awl (kiribori) or with shaped punches (dōgubori).

## Imitation of stitch resist dyeing and ikat weaving

Several of the stencils have imitations of shibori (stitch or tie resist techniques). The types imitated on the stencils are:

Kanoko - very small squares created by folding and pinching a small tip of fabric around which thread is wound to create the resisted rings (on K2.14, next page). Several different types of kanoko exist according to the arrangement and precise shape of the dots.



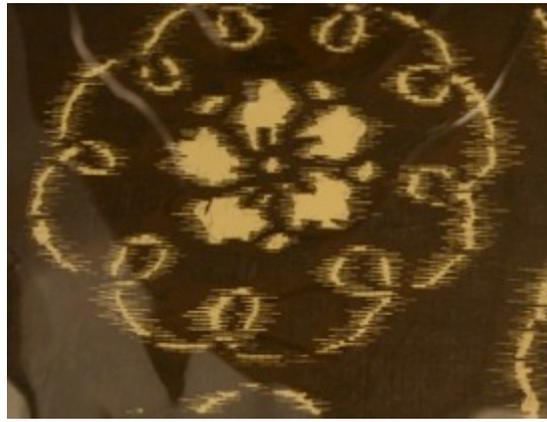
ULITA stencil no.523 (present on MoDA stencils but no examples photographed)

Miura shibori – another wound thread resist with a larger and more irregular ring than kanoko .



Kumo shibori – thread is wound in a helical pattern around gathered fabric to create an effect resembling a cobweb (bottom right of K2.41 above).

Ori-nui shibori – lines of tightly gathered running stitch which create a resist effect resembling teeth either side of the line (K2.41 above).



Kasuri (ikat weave) effects in which the pattern is dyed into the warp (and sometimes also weft) threads before weaving creating a feathered effect are also imitated (above K2.14 and K2.11).

## **Text**

Several of the stencils have dealer's stamps and carved text in the form of kana (syllabic characters) and kanji (word characters).

## **Non-repeating designs**

The majority of non repeating designs within MoDA's collection are believed to be for an export market but there are a small group of designs which include motifs such as precious objects suggesting a

domestic market. These are oblong, have a border and have small motifs or repeating geometric designs rather than single large pictorial image.



It seems most likely that these are tenugui (towels/hand wiping cloths, sometimes also folded as headbands) because they seem more often to have small repeat patterns than furoshiki (gift wrapping cloths) which are usually square with large representational imagery but I have not come across examples of tenugui with borders as these have.

### **Possible Western market stencils**

These designs all feature either individual plants or groups of plants in a natural setting. Most are more realistic depictions than are typical of the usual Japanese market stencils. The large designs seem to be at least superficially similar in subject to Japanese hanging scrolls for the domestic market the majority of which are painted.

Two tentative possibilities for these stencils are that they were either intended to create relatively mass produced imitations of hanging scrolls for the export market or that they may have been produced for

export as stencils to be used to create decoration on walls and paneling as in the image below.



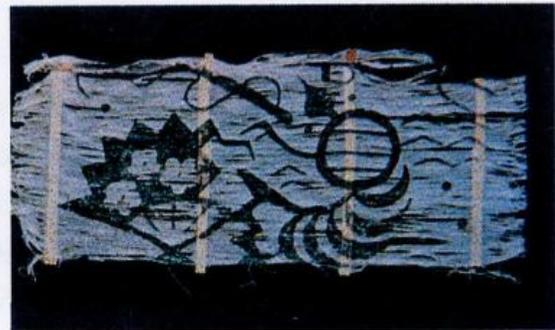
Stenciling in a Japanese influenced room at Para Para Mansion, South Australia, mid 19<sup>th</sup> century. From Forge (1981, p.139)



No equivalent examples have yet been found to the small floral

stencils (e.g. K6.5 above) except to suggest that they may have been used to create ikat weaving thread patterns (nineteenth century onwards) which Dusenbury (1993, p.68) describes as typically being naturalistic. They do not seem to strongly resemble typical pictorial ikat designs (e-gasuri) so this suggestion is far from certain.

Three mid-nineteenth-century technical innovations made this development possible. One was the *e-dai* (picture stand), also known as *osa-dai*,



*ezu-dai*, *tane ito dai*, and *sumi ito dai*. The *e-dai* is a wooden frame with a bamboo comb (*osa*) on either side (an open-topped reed). The distance between the two *osa* is equal to the length of the weft thread required to weave one row of fabric (i.e., the width of the finished fabric plus weaving take-up). A cotton guide thread (*tane ito*) is wound from side to side through each slot in the two reeds until it forms a taut, false weft face the length of one pattern repeat. The pattern is painted on the surface of the *tane ito* with a brush and india ink, following the design printed or drawn on a piece of paper placed on the surface of the *e-dai* under the stretched threads, or with the aid of a paper stencil (*katagami*). The *tane ito* is then stretched out — often on a large warping frame — as a guide for tying weft threads for the textile. This technique is most commonly used to measure and tie weft threads but occasionally is used for warp threads as well.<sup>30</sup>

Extract from Dusenbury (1993) relating to stencil use in e-gasuri.

## References

Kuo, S.C. (1998) *Carved Paper: the Art of the Japanese Stencil*

Dusenbury, M. (1993) Kasuri in W.J.Rathbun (ed.) *Beyond the Tanabata Bridge: Traditional Japanese Textiles* Thames and Hudson

Forge, S. (1981) *Victorian Splendour, Australian Interior Decoration 1837-1901*. OUP

### Youtube videos showing various aspects of stencil making and printing

<https://www.youtube.com/watch?v=UMRwL5PxG2s>

paper making

<http://www.wadazen.com/index.html>

The four links under the second black heading are videos of sharpening tools, transferring a design to the paper and cutting the stencil.

<https://www.youtube.com/watch?v=IGfnXGpz8iA>

Overview of the whole process of making and using the stencil produced by the Cooper Hewitt Museum.

<https://www.youtube.com/watch?v=76TGlTM6ZM>

Transferring the design, cutting the stencil and brush dyeing to create a multicoloured design with a single stencil

The three films below show chugata stencil dyeing – a semi industrialised process in which the fabric is stacked for double sided dyeing by soaking dye through the stack of fabric sheets

[https://www.youtube.com/watch?v=h7uotax\\_IMM](https://www.youtube.com/watch?v=h7uotax_IMM)

applying paste through a stencil for chugata dyeing

<https://www.youtube.com/watch?v=RWrRzP7thyQ>

Process of dyeing second part of above

<https://www.youtube.com/watch?v=WtZrj0N5xus>

Process of dyeing