The Conservation and Identification of Six Japanese Lacquer Plates in the Collection of HM The Queen

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THE BRIEF & PROVENANCE
The six plates arrived for treatment at the City & Guilds of London Art School, Conservation Department, in October 2013. The plates were to be conserved and restored to their original splendour, in preparation for entry into a forthcoming catalogue of Oriental artwork. All plates were marked ‘Buckingham Palace’ and dated China, c.1740.

THE ROYAL COLLECTION & ORIENTAL LACQUER
Much of the Oriental Works of Art belonging to the collection was acquired under George IV (1762-1830). George’s insatiable appetite for Asian decorative art fuelled its fashionable consumption in Britain and trade thrived. Edward VII (1841-1910), whilst Prince of Wales, received many gifts from Emperor Meiji of Japan, including ornamental lacquerware.

IDENTIFICATION
Given the extensive use of the ‘makie’ (sprinkled design) technique, famously mastered in Japanese lacquer; the attribution of ‘Chinese’ was drawn into question. Details such as the figure’s apparel were compared to contemporary Japanese traditional Japanese form and were certainly made for the export market; crafted to emulate an exaggerated English porcelain plate.

pH, CROSS SECTION EXAMINATION & ULTRAVIOLET LIGHT (UV) ANALYSIS
UV examination and cross-section staining revealed that ground layers of Plate 2 were a mixture of urushi and animal glue, ‘nikawa’, resulting in a marked water sensitivity. UV examination of Plate 2 also alluded to historical repairs. Plate 2 produced an unusually high pH reading, indicating that the urushi may have been coated with a varnish. Unaged lacquer is generally pH 4 or less and reduces upon light aging. The pale green auto-fluorescence also indicated the presence of a natural resin varnish. The restoration varnish had become matt on aging and testing revealed that although light degraded, the original lacquer surface retained a lustrous shine. It was thus concluded that varnish should be removed in order to restore the desirable properties of the original material.

Layer structure revealed through cross-section staining
1. Hira-makie gold powder
2. Black ferrous oxide urushi
3. Bulked sabi-sabi urushi
4. Nikawa urushi ground containing animal protein (stained blue)
5. Bulked animal protein (stained blue)
6. Urushi ground containing animal protein (stained blue)
7. Urushi ground containing animal protein (stained blue)
8. Urushi ground containing animal protein (stained blue)
9. Urushi ground containing animal protein (stained blue)
10. Urushi ground containing animal protein (stained blue)

REPAIR & RETOUCHING
Structural repairs and consolidation of lacquer was completed using acrylic resin Paraloid B72 in xylene at a variety of concentrations. Paraloid B72 was also used as a barrier layer to ensure the reversibility of replacements and retouching layers and the retrievability of the object. Replacement pieces for Plates 1 & 2 were carved in lime and adhered using a bulked epoxy resin. Losses were also filled using bulked epoxy and smoothed using a chalk based filler. Remnants of a rim on Plate 2 necessitated its reproduction. Pieces of pine were cut to match the curve of the plate and were then sanded to a thickness of 1mm. Mounted on a backboard, the pine was cut using a purpose made ‘scratch stock’. The blade of the scratch stock was shaped to replicate the profile of the existing rim. Very thin, curved pieces of wood produced, could then be adhered to the plate, and retouched to match the original. The process was also carried out for Plate 1.

Three types of retouching were carried out in stages, in order to achieve the depth and translucency exhibited by urushi. Black-brown, ferrous oxide urushi; red and gold nashiji and hira-makie decoration was reproduced in Western acrylic mediums, selected for their layering properties, translucency and gloss, as well as characteristics of aging and reversibility.

DECORATIVE TECHNIQUES

PHOTOGRAPHS
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Front

Plate 1 detail, nashiji and previous animal-glue repair x 200 magnification
Kirigame x 200 magnification

Back

Plate 2 detail, nashiji and previous animal-glue repair x 200 magnification

UV & pH diagram of Plate 2

UV & pH diagram of Plate 2

UV & pH diagram of Plate 2