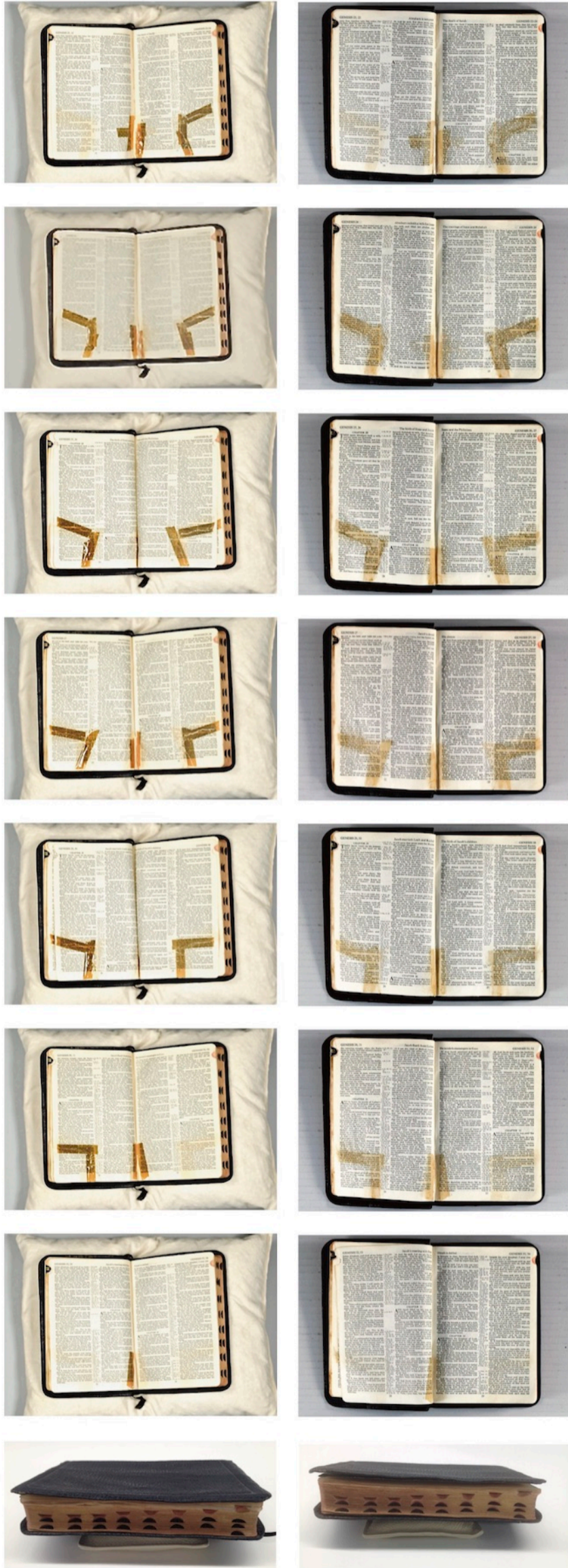


Healing Historic Repairs: Poulticing adhesive residue

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Report on treatment undertaken at the Grimade Centre for Cultural Materials Conservation at the University of Melbourne in February-April 2015.



Before and after treatment photographs

The object

King James edition Bible, bound in black leather, Yapp style. Title "HOLY BIBLE", publisher's mark and "LONDON" are embossed on the spine in gold. Black endpapers, gilt edges, a thumb index and a dark blue ribbon register. The main text of the bible is printed in black ink on thin paper. Printed by Eyre & Spottiswoode: his majesty's printers. Purchased in the late 1930s as a required text to attend Forest Hill Boy Preparatory school. Brought to Australia in the 1950s. Gifted to original custodian's daughter in 1970s as a required text to attend Camberwell Church of England Girls' Grammar School.

The damage

Tears to eight folios as a result of poor handling: being shoved into a school bag. These were then 'repaired' with clear adhesive tape. This was in the mid-seventies. The most significant damage to the bible was from these repairs. Although somewhat protected from deterioration though lack of use that reduced the exposure of the adhesive to oxygen, forty years has seen marked changes.

By the time of treatment in 2015, the adhesive residue was beginning to cross link. The paper had become translucent and the text obscured by discolouration. The adhesive residue was becoming brittle and the adhesive carrier had started to lift.

The treatment

Treatment focused on the removal of the adhesive and mitigation of its effects. Testing revealed that the adhesive residue was soluble in acetone. Direct application of acetone and swab cleaning was inappropriate as the text was also soluble in acetone. Treatment by a poultice of 5% w/v Klucel® G (Hydroxypropylcellulose) in acetone was proposed, separately, by both Briony Pemberton and Marika Kocsis.

The poultice

The Klucel® G acetone poultice was created under the fume hood following the instructions given by the manufacturer Hercules International (2001). The correct measure of Klucel® G was poured into a "vortex" of acetone and stirred vigorously for ten minutes. The mixture was topped up to the correct measure of acetone while stirring. The poultice was applied twice to each site over light weight Japanese tissue paper. This was done under the Nederman extraction arm. The poultice was then covered by a petrie dish to reduce evaporation, and left for seven minutes. The tissue was lifted away and the area allowed to dry.

The results of this treatment were a marked reduction in discolouration; return of subtlety of the paper, allowing realignment and repair of tears; marked return of opacity of the paper, restoring text legibility.



Steps of poulticing

Acknowledgements

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The treatment was undertaken and this poster written on the land of the Wurrundjeri people of the Kulin Nation.

Further reading

- Hercules International 2001, Klucel®: Physical and Chemical Properties, Aqualon.
- O'Loughlin, E & Stiber, I 1992, "A Closer Look at Pressure-Sensitive Adhesive Tapes: Update on Conservation Strategies", The Institute of Paper Conservation: conference papers Manchester 1992. Institute of Paper Conservation, 1992, pp. 280-287.
- Smith, M. A., Jones, N. M., Page, S. L., & Dirda, M. P. 1984, "Pressure-sensitive tape and techniques for its removal from paper", Journal of the American Institute for Conservation, Vol. 23 No. 2, pp. 101-113.