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Getting Back to Basics: Low-Tech Consolidant Testing on a Tight Schedule

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The Object

- Abelam basketry mask, probably a yam mask, selected for loan to a local gallery (YPM ANT.269341)
- No provenience beyond donor's name - identified stylistically
- Red, yellow, white, and black pigments are powdery and crumbly - significant loss expected during transport/display



Cultural Background

- Yams are an important part of the cultural landscape of the Abelam people of New Guinea
- Annual ceremonies bring different communities together to celebrate and compete over the largest yams, results determine status of men
- The largest yams (2-3 meters) were decorated with fresh flowers, fruit, feathers, and either new or used masks and shells
- Masks could be heirlooms, but the paint was redone every year and was not expected to last
- Pigments may or may not have had binders

Purpose of Study

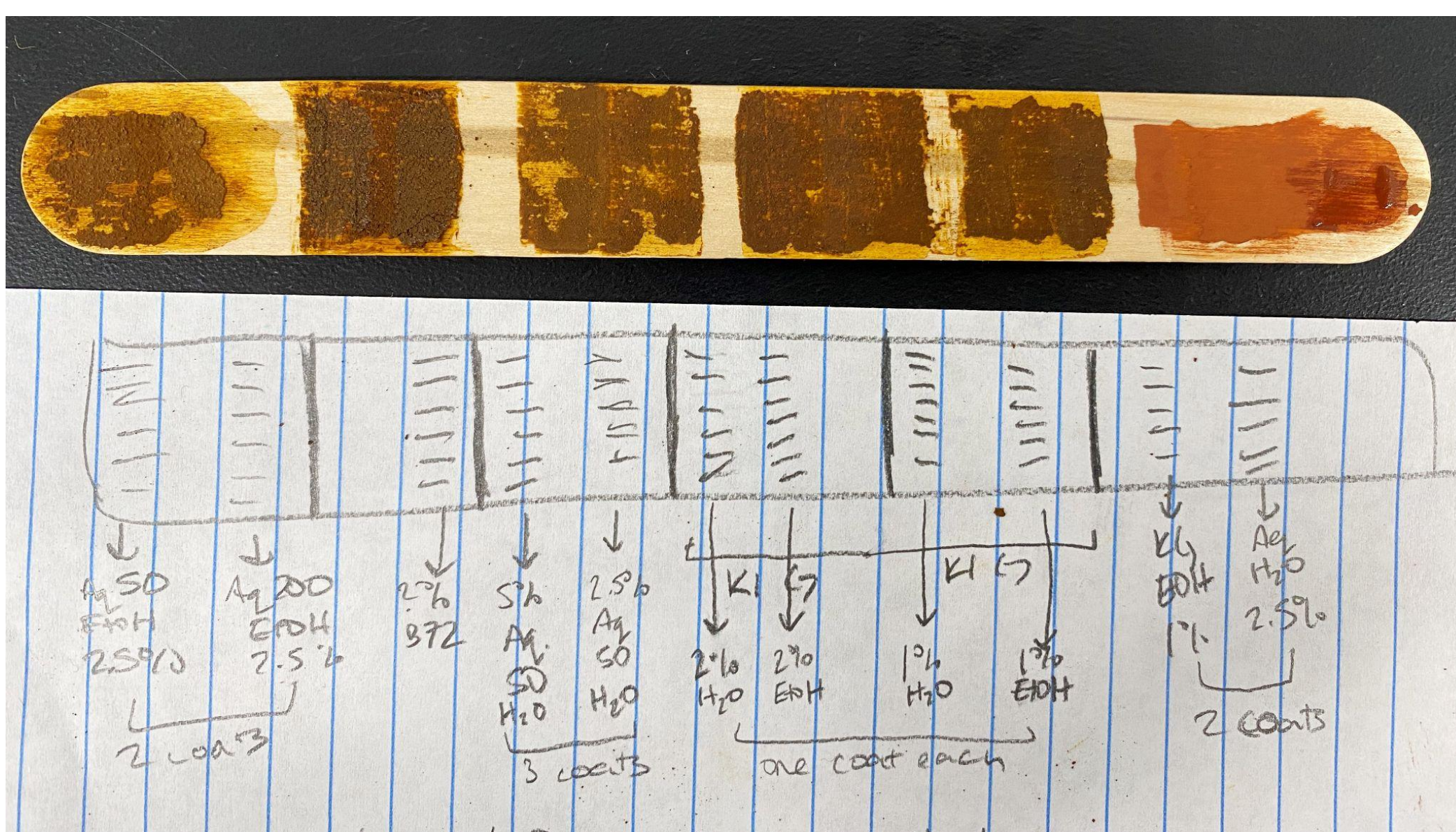
- Which consolidant already available in the lab will successfully consolidate the powdery and crumbling pigments without significantly changing their optical properties?
- Pigments need to be consolidated to avoid losses during transport and repeated handling
- Consolidant needs to improve cohesion and adhesion of the pigment layer without significant color change or gloss
- Research, testing, evaluation, treatment, and packing need to be completed in 3 weeks - a very tight schedule
- No time or resources for analysis of the mask or the tests (e.g. pigment ID, colorimetry/spectrophotometry) - need to keep it simple

Method

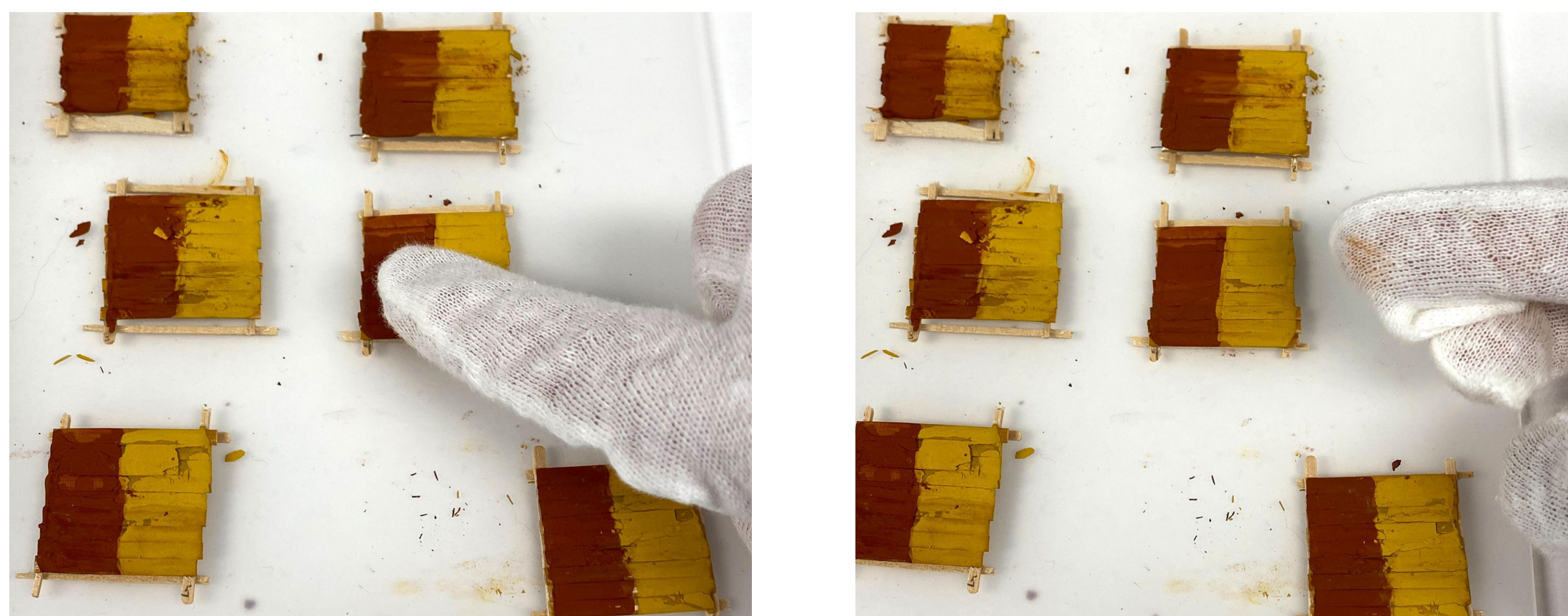
- Literature review to find consolidant options
- Create facsimiles from rattan & powder pigments
- Apply selected consolidants to facsimiles, two coats
- Visual/physical assessment of pigments between coats
- Best two consolidants tested on the mask
- Winner applied to the entire mask



Preparing the facsimiles: rattan glued to toothpick frames



Preliminary tests eliminated some adhesives, solvents, and concentrations: B72, Aquazol 200, 5% Aquazol 50, 2% Klucel in EtOH



Cohesion/adhesion tested by swiping with a gloved finger and checking the residue removed. Made assessment of color change difficult because red smeared into yellow.



Klucel 1% in H₂O and Funori tested on mask - no obvious color change, but Funori slightly better for powder reduction

Aquazol 50, 2.5% in Ethanol



Before One Coat Two Coats

Spread too easily, dried quickly, visible tideline, needed two coats to reduce powdering/flaking

Funori, 1% in Water



Before One Coat Two Coats

Did not spread too much or lift flakes, good powder/flake adhesion with 2 coats, minimal tide line, slight shine on red

Klucel G, 2% in Water



Before One Coat Two Coats

Too thick, difficult to apply w/o lifting flakes, left dark spots, good powder/flake adhesion

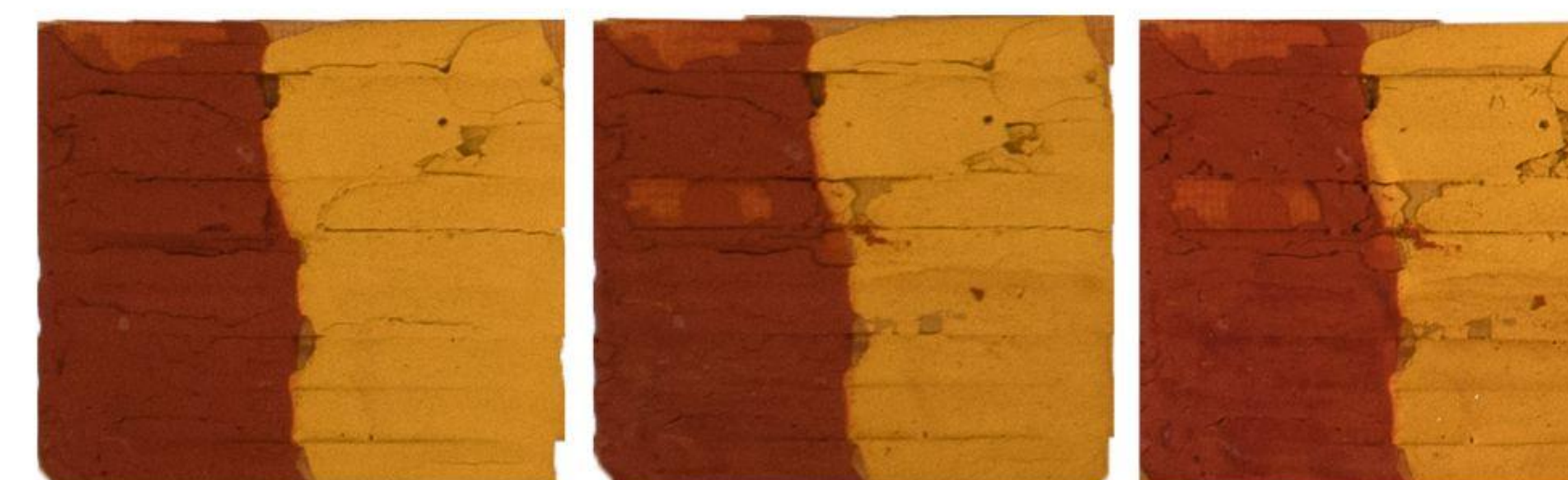
Klucel G, 1% in Water



Before One Coat Two Coats

Not too thick, did not spread or lift flakes, minimal tide line, good adhesion with 2 coats, slight shine on red

Klucel G, 1% in Ethanol



Before One Coat Two Coats

Dried faster than H₂O, most visible tideline and dark spots, good adhesion with 2 coats (1st coat lifted flakes)

Outcome

- Funori selected over 1% KG in H₂O due to slightly better cohesive properties
- Two coats Funori applied to the mask - significant reduction in powdering and crumbling, minimal darkening, interpretation of the object not affected
- Slight gloss visible in tests was not visible on the mask - facsimiles were not perfect, but good enough for



Acknowledgements

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