

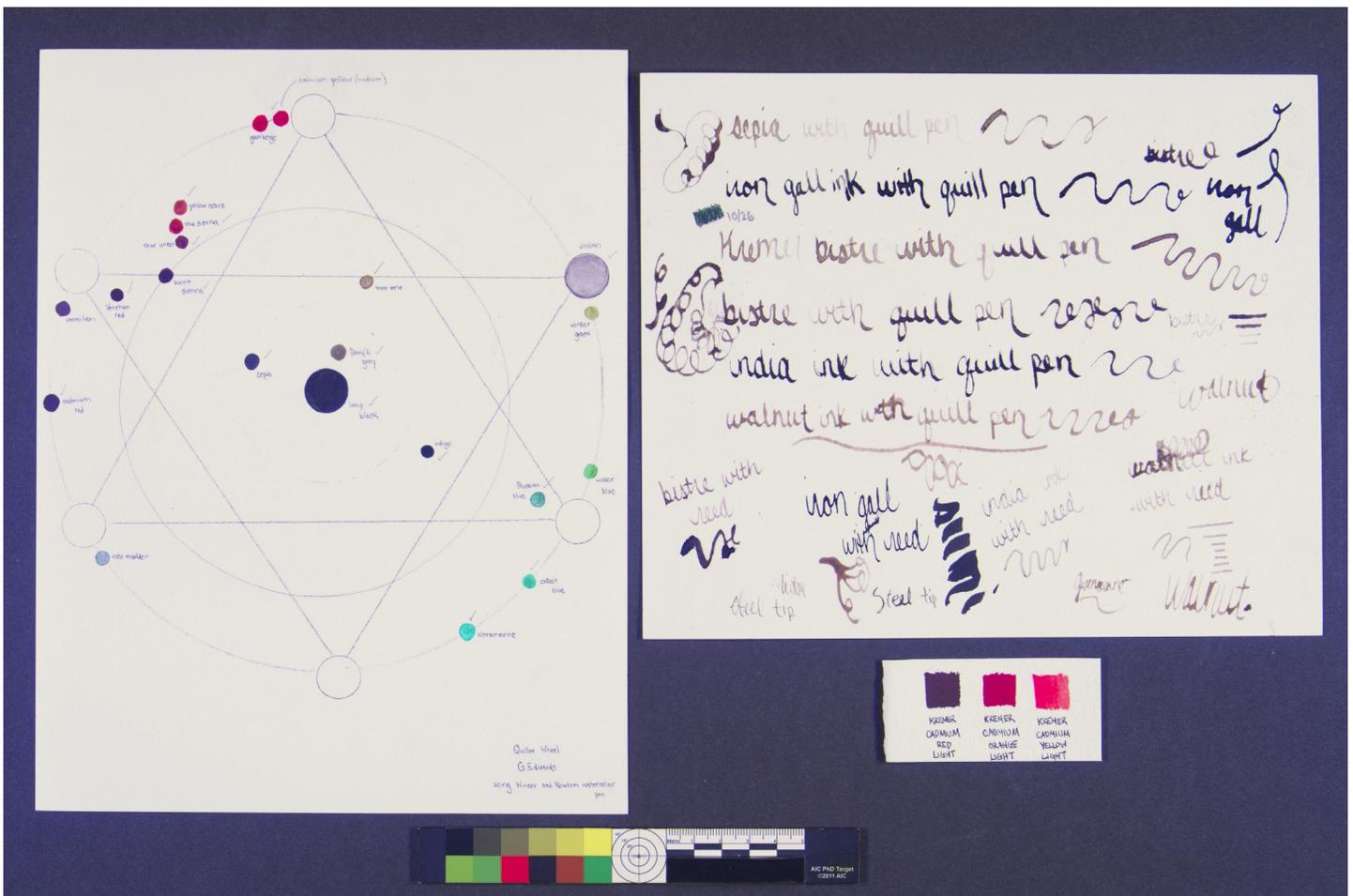
Section 20—False Color Ultraviolet

Digital Imaging Workflow for Treatment Documentation

Conservation Division, Preservation Directorate, Library of Congress

FALSE COLOR ULTRAVIOLET (MODIFIED CAMERA)

FCUV is a processing technique that combines channels from two images captured with the modified camera: visible and reflected ultraviolet, resulting in one false color image.



False color ultraviolet photograph

Section 20—False Color Ultraviolet

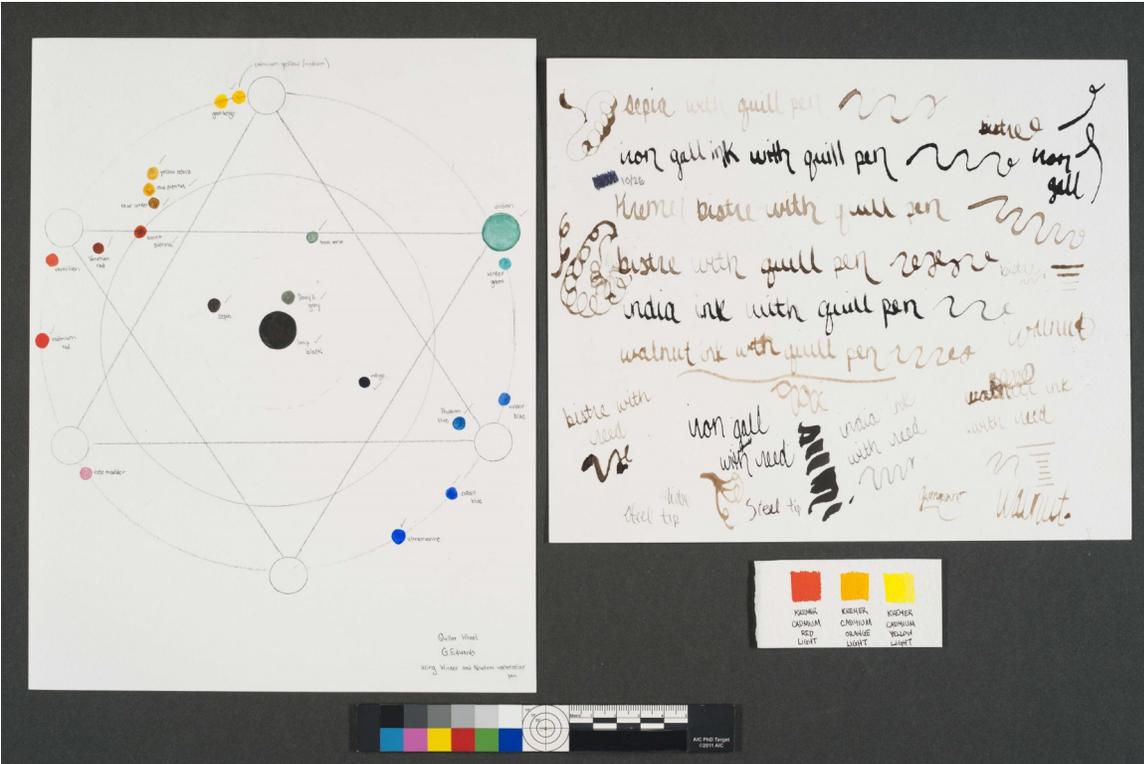


Figure 20.01

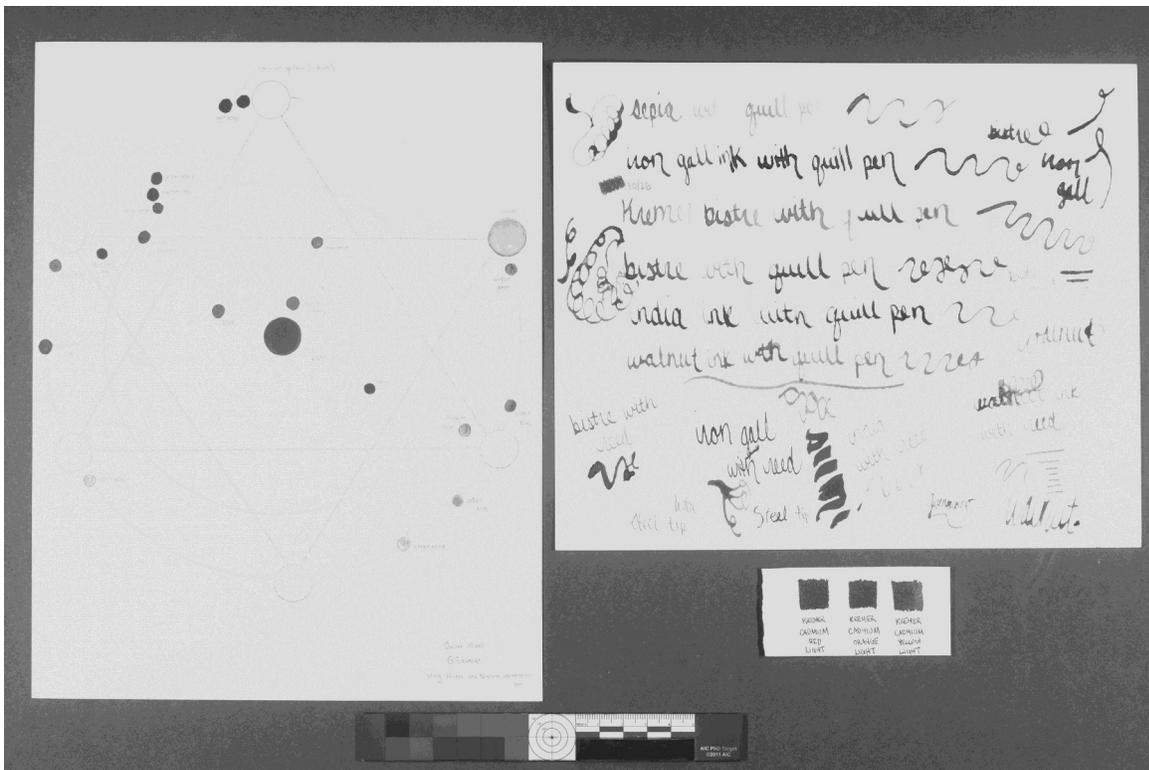


Figure 20.02

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Capture

Image Capture

If not already done:

1. Using the modified camera with the CostalOpt lens, capture and process a visible illumination image (Fig. 20.01) following instructions in Section 14. Do not crop or straighten the image.
2. **Without moving the camera position or object position,** capture and process a reflected ultraviolet image (Fig. 20.02) following instructions in Section 18. Do not crop or straighten the image.

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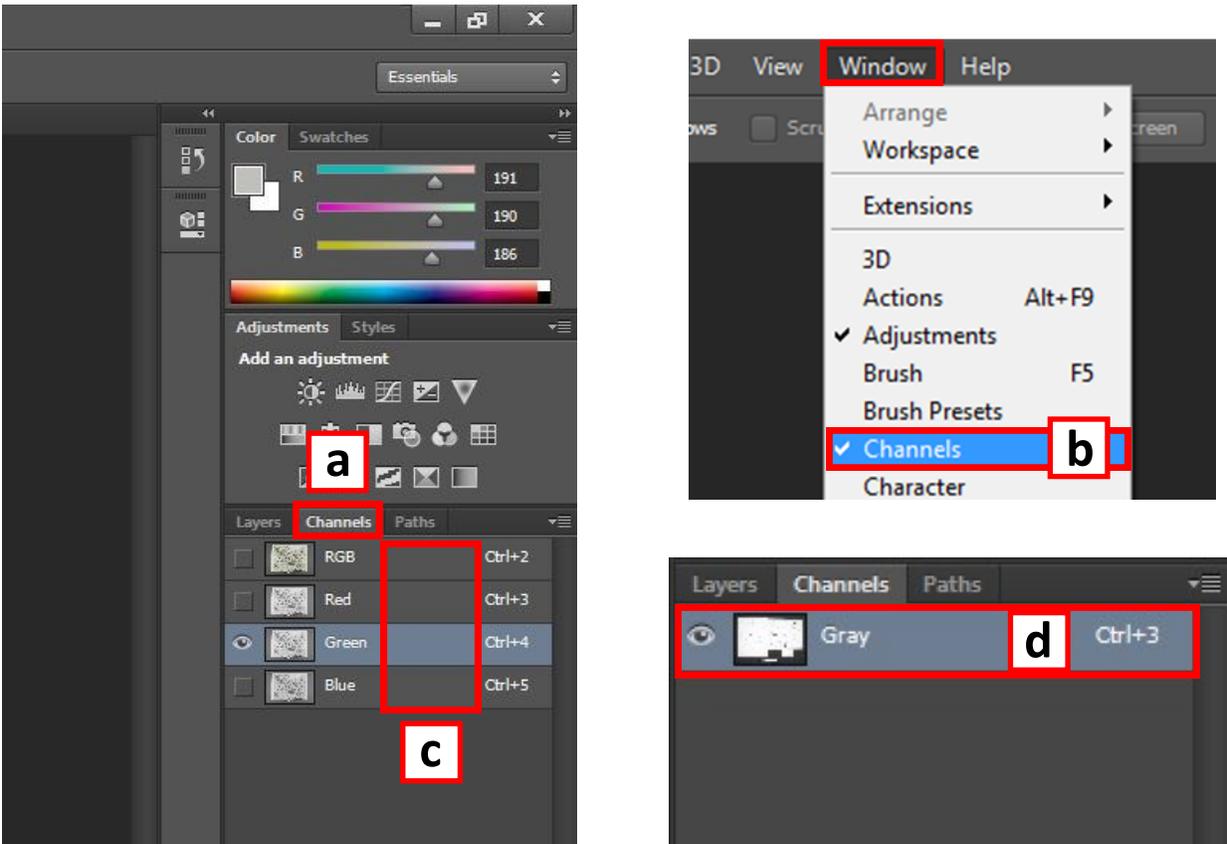


Figure 20.03

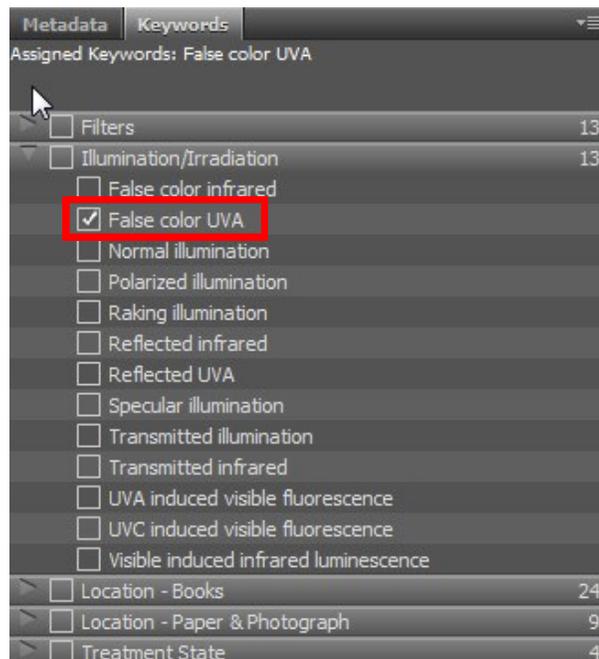


Figure 20.04

Section 20—False Color Ultraviolet

Image Processing

Create the FCUV Image File

1. Open both the reflected ultraviolet and visible illumination .tif files in **Photoshop**. If the *Channels* tab is not already displayed in a right panel (fig. 20.03a), select *Window > Channels* (fig. 20.03b).
2. Select the visible illumination image file. When selecting a channel, make sure to click in the middle of the channel bar (fig. 20.03c). In the *Channels* window:
 - i. Click on the *Green* channel. Click *Ctrl A* then *Ctrl C*.
 - ii. Click on the *Red* channel. Click *Ctrl V*.
 - iii. Click on the *Blue* channel. Click *Ctrl A* then *Ctrl C*.
 - iv. Click on the *Green* channel. Click *Ctrl V*.
3. Select the reflected ultraviolet image file. In the *Channels* window:
 - i. Click on the *Gray* channel (fig. 20.03d). Click *Ctrl A* then *Ctrl C*.
4. Return to the visible illumination image. In the *Channels* window:
 - i. Click on the *Blue* channel. Click *Ctrl V*.
4. Click on *RGB* in the *Channels* window to see the final FCUV image.
5. Save the final FCUV image as a new .tif file, following the naming protocol in Section 4.
6. Close the other images without saving the changes that were made to create the FCUV file.

Metadata

Add metadata as you would for normal illumination except when applying *Keywords* (Section 3). Choose *False color ultraviolet* under *Illumination/Irradiation* (fig.20.04). No filters should be selected.