Summer Harvest

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The use of steam to extract color from plants bundled within fabric can yield darker and more intense color while using less water compared to immersion dyeing (Kadolph & Casselman, 2004; Flint, 2008). Steaming procedures include steam from a pot on a fire (Flint, 2008), stove top (Kadolph & Casselman, 2004), and electric skillet (Feldberg, 2014), while procedures for a pressure cooker are less known, perhaps due to its rare use in today's kitchen. The purpose of this project was to use a pressure cooker to extract color from late summer plants.

With the first hard frost approaching, viable leaves, blossoms, and roots were harvested from the designer's Midwest garden. Leaves included woad, Persian shield, purple basil, geranium, coral bell, coleus, and mint; fresh blossoms were red mum, red and purple verbena, blue and violet lobelia and blue geranium; the root was madder. In addition, previously frozen black hollyhock and red hibiscus were also used. I was particularly interested in the woad, verbena and lobelia outcome using the high temperature steam as I had gotten blue to turquoise with solar heat earlier in the season. In addition, I was bundling fresh madder root for the first time.

Plant parts were placed on wet silk/wool plain weave fabric and covered with wet silk broadcloth. Both fabrics measured 44 in. x 54 in. and were pre-mordanted with aluminum sulfate at 12% of the weight of fiber. This fabric and plant 'sandwich' was accordion folded lengthwise, then crosswise, placed between 4 in. x 4 in. ceramic tiles, and tightly secured with two C-clamps. The bundle was soaked in water for 15 minutes and placed in a 22 quart stove-top pressure cooker on a rack set above two inches of water. The bundle was steamed for one hour at 15 lbs of pressure. After two hours the bundle was removed, dried in bundle form for one day, then

opened and cured for three weeks. The yoke and tie were dyed with ground madder root in an immersion bath. The silk twill lining was dyed with weld and dipped in indigo to yield green. All fabrics were washed with a pH neutral soap.

Contributions were made to the existing knowledge of contact dyeing with plant parts. This work documented the color extraction of garden plants on wool/silk and silk plain weave fabrics, procedures for using a home pressure cooker, and effects of steaming fresh madder root. While solar extraction for woad, verbena and lobelia was blue and turquoise, the high pressure steam yielded dark yellow-green. These outcomes of darker and more intense color support Kadolph and Casselman (2004) as well as my prior explorations. The fresh madder root was a dark coral red with fine root hair detail imparted on the cloth. This degree of detail was not expected, but supports Flint's (2008) use of hard sticks in her bundles. An advantage of pressure steaming plants onto a wool blend was the minimal color loss after washing. Possible disadvantages are the size limitation of the pot and the heat-set creases on the cloth from the high temperature.

References

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