

# Eco Prints: Dyeing and Printing with Plants

## *Sustainable Practices for Color Effects*

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## Purpose

- Solid color yarn dyeing information available
- Explore/document unique color effects on fabric
- Direct contact between plant & fabric
  - (Kadolph & Diadick-Casselmann, 2004; Flint, 2008)
- Extraction through solar & decomposition
  - (Richards & Tyrl, 2005)
- Alternative, sustainable dye method

## Methodology

### Practice-based

- Experimentation to discover/revise methods with the end result being an artifact (Gray & Malins, 2004)



## Fabric Preparation

- Scour & Mordant (Wipplinger, 2005)
  - Potassium aluminum sulfate
  - Aluminum acetate
  - Soda ash
  - Cream of tartar
- Bag & refrigerate or dry
  - Cellulose vs. protein

## Plants

- Grow in landscaping; K-State student farm; source in the wild  
(sumac, ironweed, goldenrod, biden, oak galls, osage orange bark, broom sedge)
- Fresh, frozen, dried







Cosmos



Weld



Hollyhock



Hibiscus



Coreopsis



Zinnia



Madder



Marigold



Indigo



Tickseed



Pansy



Rudbeckia





Hopi Black Sunflower



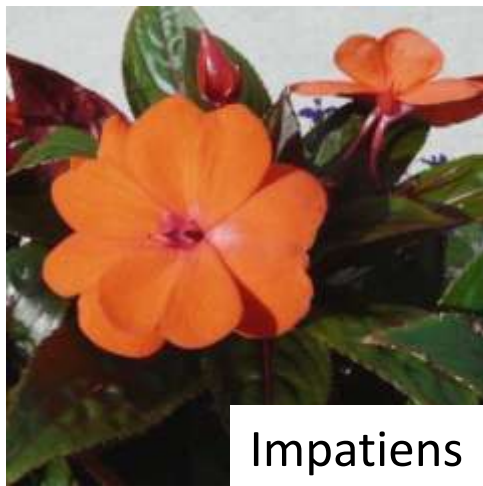
Dahlia



Purple Basil



Daylily



Impatiens



Safflower



Gaillardia



Coleus



Woad



Rudbeckia



Chamomile



# Dye Extraction

## Electric or Gas

- Monitor temperature & time



## Solar & Decomposition

- Natural resource
- Variables
  - Container size/amt of fabric/amt of water
  - Outdoor temperature/time
  - Plant hardiness



## Single Plant Value Effects

Frozen black  
hollyhock; solar dye;  
bamboo/ organic  
cotton/spandex  
jersey knit; inset is  
exhaust on silk  
crepe de chine.





## **Multi-Plant Variegated**

Flowers (cosmos, coleus, coreopsis, day lily, pansy, hollyhock) on hemp/silk faille. Rolled & covered in plastic; solar dye.





## Ombre Effect

Lemon gem marigold, zinnia, cosmos, & coreopsis layered by color as t-shirt was scrunched in jar; solar dyed one day.







**Physical Resist.** Flowers were placed by color (cosmos orange, day lily/hibiscus/hollyhock, cosmos yellow, pansy/lobelia) in sections on one-half of damp, mordanted silk crepe de chine. Cover with remaining fabric; twist & secure sections; mist with water; cover; and solar dye.



## Tri-fold Print

Accordion pleat and fold mordanted fabric into a stacked triangle while inserting fresh and frozen petals into corners. Wet bundle; place in plastic bag under weights; solar dye.

Flowers: tickseed, hollyhock & cosmos  
Fabric: cotton/silk satin





## **Flower & Leaf Imprints**

New Guinea impatiens on mercerized cotton print cloth. Folded damp fabric over impatiens, covered with plastic and weighed down with wood shelving; solar dye.





## Imprinting with Dahlia

Placed dahlia's on half of damp organic cotton sueded muslin, covered with remaining fabric. Encased in plastic, added weight and solar dyed.





## **Imprinting Layers**

Color permeates through fabric layers (stack, fold, roll) creating shadow imprints.

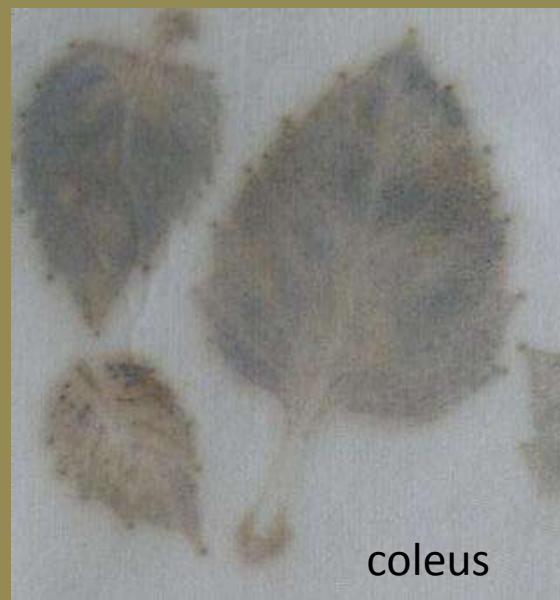
Hibiscus on cotton/silk; accordion folded; solar.







weld



coleus



hollyhock



coreopsis



black pearl  
pepper

## Imprint Samples

## Prints by Hammering

- Sandwich fresh plants between mordanted fabric; fabric or paper as a base
- Hammer the fabric using a hammer with a rounded rubber face. (Use scrap fabric under the hammer head to prevent smudging).
- Remove plant, dry, press, hand wash to remove remaining plant pieces and excess color; machine wash.







***So...what do you do with these fabrics???***

**From the Garden Garments**





# Selected References



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