



DYEING WITH NATIVE PLANTS BY ANN JOHNSON OF ELVENHOME

"Are you the one who dyes things with plants?" they'll ask me. Why do you do it THAT way, anyhow?!"

Sometimes skepticism and disbelief are as evident in their expression as if they were asking a person why on earth they plowed their fields walking behind a horse...the hard way.

I began to learn weaving in 1972. One of the first useful fabrics I wove was an overshot pattern which was the basis of colonial coverlets. It was constructed of cotton warp and acrylic yarn weft. It looked nice but there was something lacking. I wanted a more hand-made, one-of-a-kind look to my work.

Knowing that there were no "boughten" dyes in early times, and having seen the strong but mellow colors in museum coverlets, I became curious enough to start researching old "household manuals" for possible recipes. I came across some great pieces of information along the way: how to fireproof a shingle roof, make your own paint, cure the gout, etc. I did find some old formulas which were often perplexing but enough to get me started. It was quite an illuminating experience, leaving me with the greatest respect for the inventiveness and "try anything" attitude that was evident in the everyday lives of our self-sufficient forebears.

The exploration into natural dyeing took me far afield from weaving for a time. I learned to spin (still learning) and how to handle the sheep's wool from raw fleece to yarn. Quite simply, I guess, I enjoy knowing how to perpetuate ancient crafts that are still useful. Sort of comparable to making Grandma's Old-fashioned Boiled Raisin Cake from scratch rather than succumbing to General Mills.

Beyond the surface reasons for doing "my thing", there are deeper feelings I would like to express. They may sound a little crazy to some, but I think there's a lot of folks who will know where I'm coming from.

"MAKING DYES FROM NATURAL MATERIALS BECOMES A SENSUAL HIGH"

Why does a potter get off on all that wet clay? Or a woodworker become ecstatic about the grain in a piece of black cherry or walnut? It's love for the medium that communicates itself through the senses. An appreciation for what the raw material has within it, the possibilities to be brought to creation by the craftsperson's imagination and skill.

Making dyes from natural materials becomes a sensual high for me: colors, textures, patterns, sight, smell, touch. Gathering goldenrod in full bloom when their abundance overwhelms me. Dealing with persistent bees, and the damned mosquitoes, and a spider up my pantleg. The implacable heat of the sun rolls up from the field and the sweat prickles and drips. Going into the woods after an all-night rain to scrape soft lichens from trees and boulders, accepting wet feet and water down my back because the reward will be batches of wool or yarn transformed to yellow, gold or Auburn, fragrant with that peculiar haunting scent of earth and woods imparted by lichen dyes. During good weather I prefer to boil the dyebath outdoors over a wood fire. I think I must get a perverse enjoyment from woodsmoke in my eyes! And it goes on and on.

The challenge of experimentation and the rush of discovery. Every plant, leaf, blossom or bark has at one time or another consumed me with curiosity. What colors are they clumping to their botanical bosoms? Could I persuade them to part with their secrets? After nearly five years I've learned much, but there's still the excitement of identifying a new plant and putting

it through all the variations of mordants to see what colors it will produce. I may end up with 10 shades of green, but no two will be alike. For a spinner or weaver that's one form of heaven! No restriction in your palette to unimaginative (commercial) shades like Spring Green, Kelly Green or Forest Green. It's a boon for knitters, too. The subtle beauty is breathtaking when yarns are spun from a combination of dyed wools carded together. The resulting garment becomes truly unique.

Thus far, I've been dealing with my personal impressions. Historically, natural dyes have been with us for centuries. The desire to beautify ourselves and our surroundings was evident in earliest history. Archeological discoveries have established that dyeing was a well-developed art by 3000 B.C. in such countries as Mesopotamia, Egypt and India. It was not limited only to the continents of Europe and Asia, but also practiced to a high degree by the ancient civilizations of South and Central America. Our own North American Native peoples used many dyes in their daily lives to decorate their pottery, clothing, baskets, ceremonial objects or to paint their bodies for religious rituals.

The European knowledge of natural dyes came to our Eastern shores when our foremothers stepped off the first ships. Usually, the information was passed on from mother to daughter and rarely written down. Therefore, the facts were often subject to slang, colloquialisms, mistaken interpretations and differences in regional material. Some of the old surviving directions are very misleading. They nearly became lost entirely when the first synthetic dyes came into use in the mid-1850's.

Actually, the people probably the most responsible for preserving the knowledge of dyes that we now have were those who lived in the remote mountainous regions of Appalachia, the Southern Highlands and, to some extent, New England. Because they were not exposed to commercial dyes or "boughten" yard goods as quickly as their urban neighbors, they continued to obtain their colors by the methods handed down through generations.

A highly enjoyable and informative account of dyers and dyeing methods can be found in *FOXTIRE 2* (Anchor Press/Doubleday) and *HANDICRAFTS OF THE SOUTHERN HIGHLANDS AND HANDICRAFTS OF NEW ENGLAND*, both by Allen H. Eaton. I believe the latter two have been reprinted by Dover Publications. Making "vegetable" dyes seemed to be as common as making the daily batch of bread. One inescapable fact about extracting dye from plants: it takes time. When I'm doing it myself I never fail to marvel at the vast number of things that men and women were able to produce in the past by the slower hand methods. Function, durability, beauty and know-how are all inherent in these things that have been handed down to us. They deserve our honor and respect by using them with honesty and purpose.

When I began teaching workshops it became necessary to put some notes together for beginning dyers as a technical guide. I'm adding them to this article so you can see what is involved in the actual process. If you are moved to try dyeing, this should encourage you. Feel free to drop me a line if you have questions. Dyeing is a very broad subject and, obviously, I've only scratched the surface here in this article, but it may open a door for you.



NOTES ON NATURAL DYEING

GATHERING MATERIALS:

Natural materials differ according to climate and geographical region conditions. Also, the growing conditions of the season: hot, cold, too wet, too dry, etc. The time of year when the materials are gathered can have an effect on the final result, too. Generally, it is best to do the gathering at the peak development of the plants - late in the season. You'll have good and bad years for dye materials.

WHEN TO GATHER:

BARKS AND ROOTS: Gather in the early winter or late spring when the sap is up. NEVER destroy a living tree to get materials. Instead, try to utilize a tree that is to be removed or has blown down. It's a nice thought that the tree will live on in the color it produces.

BERRIES: As a rule only dark colored berries make dye, i.e.—grapes, blackberries, pokeberries (sometimes called pokeweed). They should be picked when fully ripe. Not all berries make dyes, but it's fun to experiment.

GRASSES: Leaves and stems - collect these late in the season for as long as the plant is in good condition. A full season's growth produces better dye substance.

BLOSSOMS: should be cut just as the flower reaches full bloom. It is good to experiment, but not all blossoms make good dye.

NUT HULLS OR SHELLS: Best collected when nut is mature, before drying out from weather conditions or leaching out in the rain. Butternut and black walnut are best for dye when the hulls are green and streaked with brown. Gathering these always results in well-dyed fingers, by the way!



PRESERVING DYE MATERIALS:

Dye materials can be preserved by carefully drying or freezing. Some color will be lost in drying, very little in freezing. Those that you purchase from a supplier should be stored in a cool dry place to protect their potency—and your investment.

BARKS AND ROOTS: Air dry on screens or trays.

BERRIES: Do not wash. Put proper amount for planned dyebath in a plastic bag, squeeze air out and close tightly, and freeze. Be sure to label well with moisture-proof pen, especially when storing materials which are not edible, as in the case of pokeberries, which are poisonous to people.

BLOSSOMS ONLY: Dry best on screens, but paper towel-lined trays work well also. DO NOT DRY IN DIRECT SUNLIGHT. Most freeze well, too. Use same method as berries.

LEAVES, GRASSES, TWIGS, NUT HULLS: Air dry

LICHENS: Air dry

STORING:

FROZEN: Store in the usual manner, paying special attention to labels. It will save a lot of frustration later on, and maybe a costly mistake.

DRIED: Be sure the material is THOROUGHLY dry before storing or molding will result, not only ruining the dye material but also wasting your time and energy used in the gathering. Large grocery bags make adequate storage containers, but I prefer to use glass or plastic half-gallon or gallon jars. Often these can be scrounged from restaurants or cafeterias. You can see what you've got at a glance and they look much neater.

WHAT TO GATHER AND HOW MUCH:

So far I've only talked about gathering and preserving, and not much about specific plants or quantities needed. As a rule, equal amounts of dye material and yarn (or washed wool) will yield good color. For experiments, you can match them ounce for ounce. Large projects, pound for pound. Of course, when planning a large project, always dye all you will need of one color in one dyebath. If you run short, chances are that you won't ever be able to duplicate that color again.

The North Country has an abundance of natural dye plants. Please observe good conservation practices when you are gathering in the countryside. Always leave as much as you take. Acquaint yourself with the wild plants that are protected by law. Never take plants from a State or National

Park or Recreation area. It could be costly! When collecting lichens, take only the larger specimens from the colonies, and don't be greedy. Lichens grow only a few centimeters a year, so leave some to propagate for future dyers.

A few North Country dye plants are:

Acorns	Jewelweed
Apple bark	Milkweed
Birch leaves	Pokeberry
Black walnuts	Poplar (bark & leaves)
Black oak bark	Queen-Anne's-Lace
Butternuts	St. John's Wort
Curley dock (tops & roots)	Sumac (berries, leaves & twigs)
Chokeberry bark	Wild grapes
Elderberries	Yarrow
Goldenrod	Black-eyed-Susans
Lichens	

From the Dyer's Garden:

Asters	Klondikes (cosmos)
Coreopsis	Marigolds
Dahlias	Rudebeckia
Hollyhocks	Sunflowers
Lily-of-the-Valley (leaves)	Zinnias

Also carrot tops and yellow onion skins. Sources for commercial dyes can be found in the back of all dye books.

PREPARING YARN FOR DYEING:

A word about selecting the yarns you'll use for natural dyeing. Always buy natural, unbleached virgin wool yarn. Bleached white yarn will not produce predictable results because the chemicals can still be in the fibers and affect the dyebath. Wind skeins of as much yarn as you plan to dye, and tie in 3 or 4 places with cotton string. Use a figure-eight tie to prevent the strands from tangling. Cotton will not shrink and hold the yarn too tight to absorb the dye, thereby causing light spots in the skeins. Most dye substances are not fast colors by themselves. They require a mordant. These are known as "adjective" dyes. Those that don't require a mordant are called "substantive" dyes. This category includes lichens, black walnut and butternut hulls and indigo. These dyes contain acids or other substances naturally that produces fast colors.

The word "mordant" comes to us from the Latin "morders" which means "to bite" because ancient dyers thought the mordant "bit" into the yarn thereby making the color adhere. Mordants have been used since ancient times. They are not modern chemicals, although we now use them in a much more refined form. As a rule, a mordant is a mineral such as alum, iron, tin, etc. Actually, the mordant adheres to the wool fibres in the mordant bath, then forms a chemical union with the dye substance in the dyebath. The most common ones are:

ALUM: Aluminum potassium sulfate (not the one used in pickles)
 CHROME: Potassium bichromate
 TIN: Stannous chloride
 IRON: Ferrous sulfate, sometimes referred to as coppers
 BLUE VITRIOL: Copper sulfate
 CREAM OF TARTAR: Tartaric acid
 Ammonia (non-sudsy household), white vine-

gar or soda added to a dyebath or rinse will often shift a shade because it alters the acid or alkaline balance of the dye substance.

A note of caution about mordants: they are nearly all of a toxic nature. Handle them with common sense and store them away from children. Also, too much of a mordant in a mordant bath can damage the wool fibers. Be sure to measure carefully.

Too much:
 ALUM: Wool is harsh and sticky
 CHROME: Color can be impaired by light, colors go greenish
 TIN: Wool is harsh and brittle
 Addition of cream of tartar helps
 COPPER: Makes good greens
 IRON: Creates gray, gray-greens, browns and sometimes black



BASIC LIST OF UTENSILS FOR DYEING:

Enamel kettles, canners or basins. (Glass or stainless steel OK, too. NEVER use aluminum or iron unless planning on certain results.)

Wooden spoons or dowels for stirring
 Plastic measuring cups and spoons
 Plastic pails, plastic colander and cheesecloth for straining dyebaths
 An ounce scale (diet type)
 Spare gallon jars or jugs to save leftover dyebaths.

Plastic gloves if you don't want multi-colored cuticles—or have sensitive skin.

It's a good idea to keep the above utensils for dyeing only.

Prepare the mordant bath in either a glass, stainless steel or enamel vessel. Mix the amount of mordant required according to the amount of yarn needed. A good starter for beginners to experiment with is one ounce of yarn to a quart of water plus 1 tsp. alum and ½ tsp. cream of tartar. This can easily be doubled, tripled, etc. Many dye books state the mordants by weight and if you don't have an ounce scales it can be confusing. The following table was kindly passed on to me by a dyer from Ontario:

ALUM - ½ oz.: 2 ½ tsp.
 1 oz.: 5 tsp.
 2 oz.: 10 tsp.
 CHROME - Same
 BLUE VITRIOL - ½ oz.: 1 ½ tsp.
 1 oz.: 1 tbl.
 CR. OF TARTAR - 1 oz.: 7 tsp.
 IRON - ½ oz.: 2-¾ tsp.
 1 oz.: 5-½/2 tsp.
 TIN - ½ oz.: 2 ½ tsp.
 1 oz.: 4 ½ tsp.

Always try to use soft water whenever possible. The minerals in hard water can sometimes dull colors and make

yarn feel stiff. City water containing chlorine is usually bad news to dyeing. If hard water is all you have, it can be softened by adding a little Calgonite. Yarn should be soaked in fairly hot water for at least 15 minutes to open the fibres before mordanting. Yarn and mordant bath should be the same temperature at the start. Bring the bath to a simmer—about 190 degrees—slowly. Maintain for an hour. Allow yarn to cool in the bath, then remove and rinse briefly in cool water. The skeins can now be dyed immediately or stored in plastic bags in the refrigerator for about a week for future dyeing. If you don't plan to use the yarn by that time, squeeze the moisture out by rolling them in a towel and drying completely in the air. Label and store. Soak them in very warm water again before putting into the dyebath.


THE DYEBATH:

The dye material should be broken or cut into small pieces and covered in an adequate size vessel with soft water. Allow to soak at least overnight. Bring to a boil and maintain at least 30 minutes, replacing more water as needed. Some dyestuffs require longer boiling. More color is often leached from the material if it is allowed to cool in the bath before straining out the debris. This is easily done with the aid of a plastic colander or by securing 2 or 3 layers of cheesecloth over a pail with snap clothespins. Start the yarn and the dyebath together at the same temperature, and bring slowly to a simmer. Move the yarn gently during the dyeing. Usually the expected color is evident after 15-20 minutes. Remember, wet yarn appears darker than it really is. When the desired shade is reached, allow dyebath to cool, squeeze out yarn and rinse in cool water. Dry out of direct sun and label well for future reference.

LIST OF DYE BOOKS


1. Ancient Dyes for Modern Weavers
Palmy Weigle, Watson-Guptill
2. Vegetable Dyes
Alma Lesch, Watson-Buptill
3. Dyes from Plants
Seonaid Robertson, Von Nostrand-Reinhold
4. Spinning & Dyeing the Natural Way
Ruth Castino, Von Nostrand-Reinhold
5. Natural Dyes and Home Dyeing
Rita Androsko, Dover Books
6. Natural Plant Dyeing
Brooklyn Botanic Gardens, Vol. 29 - No. 2
7. Dye Plants and Dyeing
Brooklyn Botanic Gardens, Vol. 20 - No. 3





The East India Trading Co.
 ingredients for a memorable feast

Imported & domestic cheeses
 coffees, teas, biscuits & waters
 also gourmet cookware



The Wine Seller
 ...for an adventure in spirits

3 RAYMOND ST. POTSDAM, NY 13126 315 245-2040 ELEANOR M. SHAFER
 Hours 10-10 Mon-Sat.



SLU BOOKSTORE
 Located on the St. Lawrence University Campus, near the Park St. entrance
 OPEN MONDAY-SATURDAY 9am-5pm
 TUESDAY WEDNESDAY & THURSDAY 9am-8:30pm
 We are not open evenings in January

Come visit our PLANTS.

ART MATERIALS including:
 Paints, Brushes, Canvases, Papers,
 Ceramic tools, and Framing supplies.
 Still Screen Materials

We carry **MINOLTA** cameras & accessories.

Darkroom supplies, both amateur & professional.

Large Record department,
 Indian tapestries, rugs & Pottery.

Cloth and paperback books for all ages & interests.
 And much more! **Come see for your self.**



Elvenhome
 Natural dyes - yarns
 mordants

Ann Johnson
 Rt-5 Gouverneur
 287-3295

HOME DECORATORS SHOP

Wallpaper
 Artist Supplies
 Bisonite and Masury
 Paints



have all tools & accessories
 20 Elm St. Potsdam
 265-5930
 Parking in rear