

The Mushroom Dye-Gest

#6 The Newsletter of The International Mushroom Dye Institute Fall / Winter 2003

The Australian Symposium pages, on the "Art of Mushroom Dyeing" Web site, are the result of efforts of many individuals especially the staff of Green Skills who also had provided Bobi Ward, an attendee from Australia, with the camera, film and equipment to produce the many photos of the Symposium some of which you see here. Other attendees who generously contributed photos are otherwise noted.

The project was funded in part by a grant from The International Mushroom Dye Institute to the coordinators of the Symposium who expressed their desire to invest the funds into the making of the Web Site: <http://www.sonic.net/dbeebee/AustralianSymposium.htm>

It began as a vehicle to substitute for the "Show and Tell" conclusion part of the Symposium which in the end, we did not have the time to have. At that time each workshop leader would have taken about 10 minutes, to review their workshop and show the work created in it. Synopses by the workshop leaders would have been made available to all of the attendees. So now we have a virtual "Show and Tell" to share our memories with you, the members of the IMDI, who made this all possible with your annual membership dues and contributions to the scholarship fund. So here are some of the workshop synopses for you to enjoy! Thank you.

Dorothy Beebee, Editor

- Amazing Myco-Stix - Dorothy Beebee (USA)
- Dyeing with Xanthoria parietina - Henrietta Glen (Australia)
- Tapestry Weaving Workshop using the "Trishary Loom" - Trisha Gow (Scotland)
- Dyeing with fungi for beginners - Nessie Henshaw (Australia)
- Dyeing with *Gymnopilus* sp. - Andrey Marks, (USA)
- *Pisolithus dyes* - Kirsti Palmén (Finland)
- Experiments in Dyeing with Australian Fungi - Anna-Elise Torkelsen (Norway)
- Illustration and Documentation Workshop - Dorothy Beebee (USA)
- Dyes from Australian *Dermocybes* - Hjördis Lundmark, Mattias Andersson & Hans Marklund (Sweden)
- Reversible Knitting & Heliograms Workshops - Marilyn Caddell, Scotland
- Dyeing cotton - Peggy Buckingham (Australia)
- Body adornment Workshop - Nalda Searles (Australia)



AMAZING MYCO-STIX – Dorothy Beebee, (USA) Workshop Leader (in lieu of Miriam C. Rice)

At the 10th International Fungi & Fiber Symposium in Rovaniemi, Finland, August 2001, Miriam C. Rice introduced her newest experimental work with mushroom dye pigments: "Myco-Stix"®, a drawing tool similar to crayon or Conté in appearance, but with a greater range of possible uses. Myco-Stix can be used for either watercolor or oil painting, pastels, or for encaustic, depending on which kind of binder is added to the mushroom pigment, and what type of drawing surface is used. Miriam feels that this work is just in its beginning stages, just like the mushroom dyes were 30 years ago, and is looking forward to presenting further developments in the range of color, by experimenting with Australian species. She continues to extend the invitation to all to join in the experimentation at the 11th International Fungi & Fiber Symposium in Denmark, Australia. And just look how far the mushroom dyes have gone!

Since Miriam was unable to attend the Australian Symposium, her associate Dorothy Beebee presented the Myco-Stix workshop, following Miriam's intent to use only Australian species of fungi, and "pencil clay" as a simple "medium/binder". We explored the possibilities of using dried samples of *Dermocybe splendida*, *Anthrocophyllum archeri*, and an unidentified fresh *Dermocybe* sp. (which we tried to dry by the heater).

We used an old electric coffee grinder to pulverize the fungi into fine granules, and then strained those granules through a fine strainer, until we had the finest possible powdery consistency to blend with the pencil clay and a tiny bit of water. Then the Myco-Stix were molded by hand into a short triangular shape which Miriam prefers, and set aside to dry slowly for 24 hours before use. (Since this class was on the last day of the Symposium, none of us really had a chance to draw with them until we returned to our respective homes.)



Janice Laud, of Australia making Myco-Stix (Photos by Bobi Ward (Green Skills))

The second part of the class was spent using those Myco-stix which had been pre-made by Miriam Rice using California fungi and variety of media, (beeswax, *Pseudohydnum gelatinosum*, and pencil clay). Different types and textures of paper (drawing, pastel and watercolor) were offered to the students to explore the many possibilities of the medium using both wet and dry papers.

We then, took the exploration one step further and introduced a new technique at the Australian Symposium, by using samples of many types of fabric on which to draw or paint....China silk, raw silk, cotton, wool, hemp, canvas, linen and several blends produced some amazing results. And then everyone drew a little picture or wrote a message with the Myco-Stix on a fine woolen scarf (from a wonderful woolen craft shop in the town of Denmark), to send back to Miriam at home in the USA. The class was supposed to last only for the morning, but so many students were interested, we extended it to an "open studio" for students to continue to explore the possibilities of Myco-Stix on fabric. The finished swatches of cloth were then ironed with a steam iron, between paper towels, to set the Myco-Stix colors on the individual pieces of fabric.



Brit Jørgensen (Norway) drawing on scarf for Miriam with "Myco-Stix"
Photo by Andrey Marks, (USA)

DYEING WITH *XANTHORIA PARIETINA*

Workshop with Henrietta Glen (Australia)

Xanthoria parietina is a bright yellow lichen often found on old buildings or old fruit trees.

To obtain a dye, the lichen is soaked in a 2 – 2 ½ % ammonia solution for two or three weeks in a sealed container. It should be kept in a warm place.

Test the solution after that time and if a bright pink colour appears on some fiber, the dye is ready. Warm the dye to approximately 70 degrees C. Soak fibre in dye for 10 minutes.

Remove from dye and place in a sunny position. On exposure to sunlight, dye should change to blue. The stronger the sunlight, the quicker the change occurs.”



Wool samples dyed with *Xanthoria parietina*
(photo by Bobi Ward – *Green Skills*)



Sample of *Xanthoria parietina* with yarns placed out in the sun to turn blue.
(photo by Bobi Ward – *Green Skills*)

TAPESTRY WEAVING WORKSHOP USING THE “TRISHARY LOOM”- tutor Trisha Gow, Scotland

“The loom was designed with the Symposium in mind. I wanted to be able to weave when I went on holiday and I liked the idea of being able to weave the symposium samples in the plane !! The loom is designed to frame the finished article and can be hung on the wall with work in progress

There were 8 participants who were given fungi dyed yarn plus yarns and also had yarns of their own. They were taught to warp up, basic weave, *ghiordees* knot, *soumak*, and each weaving grew at the pace of the weaver. We worked so hard that we forgot to take photographs. We expected to show each other what we were doing at the “show and tell” but this event did not happen. During the workshop people came in to see what we were doing and took photograph, so if you have a photo can you let Dorothy and Trisha have a copy?”

Trisha Gow

Dyeing with Fungi for Beginners, Nessie Henshaw, Instructor

Fungi used: *Piptoporus australiensis*
Dermocybe austrosanguinea

Yarn: 2-ply pre-mordanted and in 50-meter lengths

Utensils: stainless steel and enamel pots (Pots were not consistent in size and some came up to and exceeded desired temperature quicker than others)

Mordants: Alum, Iron, Copper

Procedure with *Piptoporus australiensis* (in frozen chunks)

Yarn: 2 x 50m alum pre-mordant and
2 x 50m iron pre-mordant

Katie Syme advised us that this dye material is best used fresh or frozen, not dried. The frozen chunks took longer to thaw than we expected and the ration was increased from 100 gr fungi per 100 meters yarn to 200 gr fungi per 100 meters yarn. The pot was slow to reach the simmer point and was maintained at simmer for 1 ½ hours. The contents then strained and liquor divided into 4 pots (2 stainless steel and 2 enamel).

- 1 50-m skein alum pre-mordanted wool into s.s. pot
- 1 50-m skein alum pre-mordanted wool into enamel pot
- 1 50-m skein iron pre-mordanted wool into s.s. pot
- 1 50-m skein iron pre-mordanted wool into enamel pot

The pots were to be kept at 50 degrees for 30 minutes but exceeded this temperature.



Procedure with *Dermocybe austrosanguinea* (dried)

Yarn: 2 x 50m alum pre-mordant and 2 x 50m copper pre-mordant



Alum: one each enamel and stainless steel pot
1L. cold water and 9.4g dried fungi added and simmered for 30 minutes. Strained, pot rinsed and liquor returned to pot and temperature brought up to 50 degrees. Skein entered for 30 minutes and simmered at 50 degrees.

Copper: one each enamel and stainless steel pot
1L. cold water and 9.4g dried fungi added and simmered for 30 minutes. Strained, pot rinsed and liquor returned to pot and temperature brought up to 50 degrees. Skein entered for 30 minutes and simmered at 50 degrees.

The dyed yarn was washed with warm soapy water.

DYEING WITH GYMNOPILUS sp.

Workshop leader – by Andrey Marks (USA)

Skeins of Wool yarn were already pre-mordanted with Potassium alum. The samples were divided into three groups, for three experiments:

1.) *Gymnopilus junonius*

The mordanted skeins were added to a dye bath of *Gymnopilus junonius*, at a 1:1 ratio, mushrooms to weight of goods, simmered with the mushrooms in the dyepot which produced beautiful gold and yellows.

2) *Gymnopilus junonius* and alum mordanted wool was simmered in an iron dye pot and produced a gentle green.

3) *Gymnopilus spp.*

Some of the alum pre-mordanted yarns were put into an iron pot, and washing soda was added to the dye bath which changed the pH of the dye bath from pH6 to pH9. The original gold yarns changed to a light olive green with the change in pH and the iron pot.



Dyes from *Gymnopilus junonius* & *Gymnopilus sp.* (photo by Andrey Marks, USA)

THE PISOLITHUS WORKSHOP by Workshop Leader, Kirsti Palmén, (FINLAND)



L. to R. - *Pisolithus alba*, *Pisolithus spp.* (small) & *Pisolithus marmoratus* on wool samples.
(photo by Bobi Ward – GreenSkills)

“We had 3 different species:

Pisolithus albus,

Pisolithus marmoratus

Pisolithus "small", a yellowish small (about 5 cm).

(*Pisolithus* that has not been named yet).

From 3 dye pots we got 9 different colours.

We used yarn and fungi in the proportions

1:2, 1:8, and 1:8 with pH 9.

Pisolithus "small" gave the brightest colours.”

EXPERIMENTS IN DYEING WITH AUSTRALIAN FUNGI

by Anna-Elise Torkelsen, Oslo, Norway

1. *Anthracophyllum archeri*

A. archeri is a small, 0.5-3 cm, reddish-orange fan-shaped fungus growing on branches of deciduous trees. The pigment is orange-red and diffuses out as an olive colour when a partition of tissue is mounted in KOH and has a strong permanent dyeing properties (Bougher & Syme). However, the pigment is unknown.

We did four experiments with this fungus, and used 50 grs of dried material to 50 grs of wool (ratio of wool to dry mushroom weight 1:1).

The dried amount of mushroom was soaked for 10 minutes and then boiled for 1 hour (tapwater). The bath was strained, cooled and then divided in four equal portions, I, II, III and IV. pH in the dyebath was 4.5.



Dyes from *Anthracophyllum archeri*
(photo by Bobi Ward- Green Skills)

Results: The fungus gave lovely green colours, with more or less equal shades of green in all four experiments. This shows that to obtain a nice green colour from *A. archeri*, you don't need to use any mordant at all, and that the pH of the water does not much affect the green colour.

Personally, I liked the colour we obtained in experiment III best.

2. *Phellodon aff. niger*

We did two experiments with this fungus and used 50 grs of dried mushroom and 25 grs of wool (ratio 2:1).

- I: 12.5 grs alum mordant wool, low pH – pH 3.5
- II: 12.5 grs alum mordant wool, high pH – pH 9

Results: In I) we got an olive colour

In II) we got a dark green colour

In this experiment it is obvious that the pH affects the colour we can get from *Phellodon aff. niger*.



Anthracophyllum archeri
(photo by Dorothy Smullen, USA)

We wanted to see if low or high pH in the dyebath would change the colour, and we also wanted to see if we would get different colours using non mordant and alum mordant wool (same pH in the dyebath). We used vinegar to lower the pH and ammonia to raise the pH. The wool was in the dyebath for 3/4 of an hour.

- I: 12.5 grs alum mordant wool, pH 3.5
- II: 12.5 grs alum mordant wool, pH 8.5 – pH 7
- III: 12.5 grs non mordant wool, pH 4.5
- IV: 12.5 grs alum mordant wool, pH 4.5

Results: The fungus gave lovely green colours, with more or less equal shades of green in all



Phellodon aff. niger.
(photo by Susan Hopkins, (USA)

Experiments in dyeing with Australian fungi by Anna-Elise Torkelsen, Oslo, Norway

2. *Phellodon aff. niger*

We did two experiments with this fungus and used 50 grs of dried mushroom and 25 grs of wool (ratio 2:1).

I: 12.5 grs alum mordant wool, low pH – pH 3.5

II: 12.5 grs alum mordant wool, high pH – pH 9

Results: In I) we got an olive colour

In II) we got a dark green colour

In this experiment it is obvious that the pH affects the colour we can get from *Phellodon aff. niger*.



Phellodon aff. niger
(photo by Susan Hopkins, (USA))



3. *Phellodon spp.*

We did also two experiments with this fungus and used 50 grs of dried mushroom and 12.5 grs of wool (ratio 2:1).

I: 12.5 grs alum mordant wool, pH 4.5

II: 12.5 grs iron mordant wool, pH 4.5

Results: In I) we got a brownish colour

In II) we got a brownish green colour

In this experiment we can see that the mordant we use has an affect on the colour. With iron as a mordant the colour becomes green, while with alum it is brown.



DYES FROM AUSTRALIAN DERMOCYBES



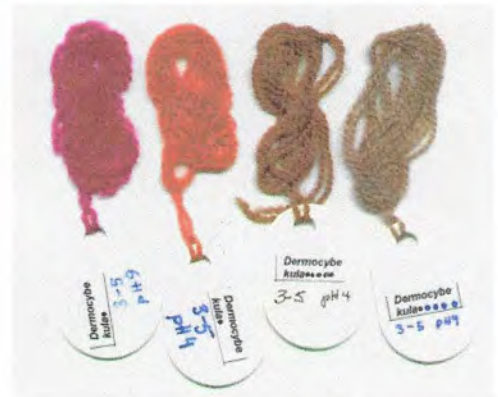
Dyes from *Dermocybe splendida*
L to R. stems; caps pH 4.5; caps pH 8
(photo by Bobi Ward – Green Skills)



Dermocybe splendida
(photo by Dr. Richard Robinson, Australia)



Dermocybe kula (photo by Dr. Richard Robinson, Australia)



Wool yarn dyed with *Dermocybe kula* in workshop: "Mysteries of pH" taught by Preben Graae Sorensen, Denmark



Dermocybe sanguinea samples using all mordants and one unmordanted fiber. Undyed tester sample on right. First and second baths on the left (photo by Carol Lee, USA)

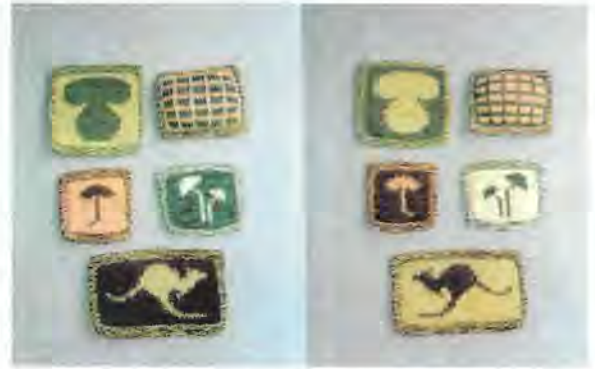


Dermocybe sanguinea (photo by Carol Lee, USA)

(Note: This experiment was done by Carol Lee on her own after the close of the Symposium, rather than as part of a Symposium workshop.)

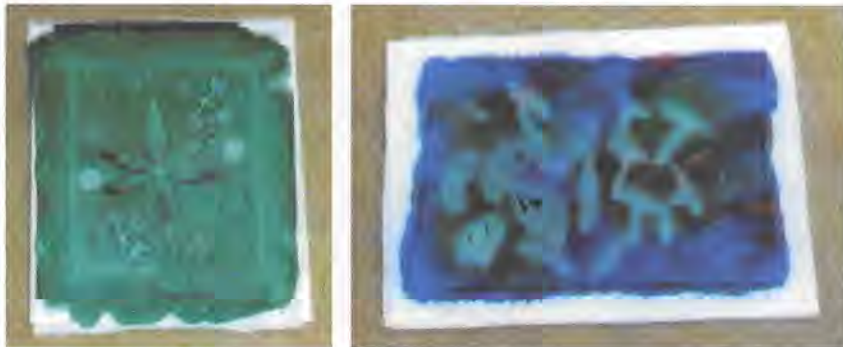
REVERSIBLE KNITTING led by Marilyn Caddell (Scotland)

"I thought this would be a way that delegates could use small amounts of fungi dyed yarn obtained from pot luck dye workshops, or from experiments of their own. The technique involves knitting two colours at once, one behind the other, so that the knitting is reversible i.e. green with a brown image on one side and brown with a green image on the other. In making a garment, the welts, cuffs and collar would be knitted using both colours together, giving a mottled effect, and then the two colours knitted separately for the main body to give a double fabric.



"Samples of reversible knitting by Marilyn Caddell, Scotland" (All Photos by Marilyn Caddell)

For the workshop I had worked out graphs - three of different mushrooms and one of a kangaroo. These were knitted up into small sample squares by the attendees. The concentration levels were amazing. Conversation came to a stop! Stitches are arranged in alternate colours along the needle (A B A B A B , etc.) Stitch A is knitted and then the yarn brought immediately to the front of the needle, stitch B is then purled. Yarn A can then be returned to the back of the needle ready to knit the next stitch A and so on. Knitters will hopefully understand what I mean! If only ONE colour is used in each row, then at the top of the knitting it is possible to separate the stitches on two needles (all A's on one and all B's on another). The two sides of the knitting will then be separate and can be made into a bag or cushion. There is plenty of scope to exploit this. One attendee was very excited by this possibility to make bags and was looking forward to experimenting when she got home. Several stayed long after the workshop time ended to make sure they had got to grips with the technique."



HELIOGRAM WORKSHOP

led by Marilyn Caddell (Scotland)

"A "heliogram" is a way of recording an image onto fabric using dyes which react with the ultraviolet rays from the sun. In suggesting this workshop, my idea was that delegates could record some of the flora (leaves, flowers, grasses, etc.) found on the forays or growing around the Symposium campus.

The dyes are called Pebeo Set a Colour Transparent Dyes. They are manufactured in France, but are available in good art supplies shops in various countries. White fabric (either natural fibres or man-made can be used) is stretched over a frame, so that there is an air space underneath. The dyes are then applied with a foam brush or wide bristle brush - one colour only, or a marbled or swirled effect using several colours. Objects are then laid on the wet surface and the frame put out in the sun.

When the fabric is fully dry the process is complete. The objects can be removed and an image in white will be left on the coloured fabric. Ironing for several minutes sets the colour on the fabric, which is then washable. The objects used (i.e. leaves, etc.) must be flat, so that all parts touch the fabric, or a crisp image will not be attained. Pressing plant material in advance is a good idea. A sunny day with NO wind is ideal, so that points of a leaf will not lift in the breeze. Lace, feathers and cut out cardboard shapes can also be used. On the day that we had our workshop the weather was very mixed. Several heavy showers of rain occurred and we had to rush outside, bring the frames in and try to finish them in front of halogen lamps. Lamps work well, but not if five or six people need to put their frames in front of one lamp. The range of the ray is not wide enough. However, we achieved some lovely results. On silk the images even seemed to have a darker outline round the edge. Often the veins of the leaves show very clearly. In a workshop situation we each did several small pieces, but if you can make a large frame and live in a sunny climate there are no limits!"

DYEING COTTON

TUTOR - PEGGY BUCKINGHAM ,(Australia)

The preparation of cellulose fibre for dyeing with plant dyes is arguably the most important factor in achieving a satisfactory result. It requires patience and time. A few natural dyes, known since ancient times will dye cotton with little more preparation than a good wash, i.e., indigo, tannin, iron, and some plants used traditionally in South East Asia. We have shown that a very few fungi will colour cotton without mordanting although not to the depth of colour that can be achieved with mordants, or with animal

fibres. This workshop covered the recommended* methods for scouring, bleaching, if desired, and mordanting

cotton fibre to dye with plant material, fungi in this case.

In a normal time line these procedures would require three to five days. In order that all steps were included, three sets of samples in varying stages of preparation were provided. The class worked in three teams to cover all steps, though each team was responsible for only one or two steps. Individuals were expected to observe the other teams and share information with them.

The fungi used for the workshop were *Dermocybe austrosanguinea* and *Omphalotus nidiformis*. The fibre dyed with the *Dermocybe* was mordanted in advance of the workshop with the alum-tannin-alum method (Liles #2). In addition, some were pre- and post-mordanted copper, iron, and tin salts. In class the "quick method" (Robertson) was used to mordant half the *Omphalotus* samples. These were post-mordanted with the three mineral salts. The remaining half samples were accurate dye results because we were not able to leave in the dye bath overnight.

*Liles, J.N.. *The Art and Craft of Natural Dyeing.*, The University of Tennessee Press, 1990

Robertson, Seonaid. *Dyes From Plants*, Van Nostrand Reinhold, 1973



Peggy Buckingham, (Australia) discussing dye process with Jean Mounter, (England) and Reena Robins (Australia) photo by Bobi Ward (Green Skills)

BODY ADORNMENT WORKSHOP by NALDA SEARLES, fibre textile artist, (Australia)

"The one day event in this workshop started with 12 participants. By mid afternoon the numbers had swelled to 20!



Samples of the necklaces made by Nalda Searles

Basic techniques such as making cords from shredded fungus- dyed silk and then threading seeds, beads, shells, and other found objects onto wearable necklaces was the structure of the day.

It was the choice of materials which led to so much diversity and creativity. To ply a piece of silk into a beautiful handmade cord onto which a found object can be put is quite enticing.

I recall one of the women saying now she can walk in the northern forests plying silk and will return home with a small ball of it. On the same evening I gave a slide show titled "Lines and Circles in the Land" as an artistic inspiration for all."

ILLUSTRATION AND DOCUMENTATION WORKSHOP – Workshop leader, Dorothy Beebee (USA)



Ursula Pohl (USA) and Steen Elborne (Denmark) working on mushroom illustrations

At the beginning of the class, the participants were given a variety of pencils, pens, paper and fresh Australian mushrooms to study and draw. Magnifying glasses were provided for more detailed observation. We discussed various methods of documenting mushroom species in the field, stressing the importance of on-site notes and sketches, concluding with methods of translating those observations into drawings and/or paintings. Different methods of documentation were shown – using 4 x 6 cards, and notebook pages of several sizes – whatever suited the needs of the individual student. After working in black and white media for awhile, we moved into color applications encouraging all to experiment techniques using both wax-based and aquarelle colored pencils, as well as watercolors.

By looking at drawing as a “tool” rather than a “talent”, I hoped to encourage the shy or beginning illustrator in all of us, plus stimulate those with more practice to stretch their boundaries – stressing that there was no “right or wrong” method of documentation – but rather to use what works the best for the purposes of the individual. The interest in the class was enough so that we extended our morning class to an afternoon “open studio” for whoever wanted to continue their illustration work.