The Horn Book

The Honourable Company of Horners,
The American Guild of Horn Workers

Roland Cadle, Pres. Clay Smith, Vice Pres. Russ Young, Secty-Treas.

Volume 2, Number 2 July, 1997

Report from Mansker's Station

by Bruce Horne

Attendance at the premier trade fair in the country, though hampered by windy conditions all weekend and rain on Friday and Saturday nights, was as big as the previous year, or maybe somewhat larger.

As always there was a large array of entertainment for participants and spectators alike. There were many different musical groups plus a magician and fire eater. There was also a couple of harlots who were trying to entice all gents to abandon their virtues. The rat catcher showed the results of his trapping skills; the lowly tinker annoyed all while panhandling for a few pence (which he professed would not be spent on strong drink); proud Highlanders marched and drilled with precision.

Merchants and traders plied wares including straight last shoes, artfully carved and engraved firelocks, woodcut prints, articles of fine clothing, chip carved watch boxes, plain and engraved powder horns and other products of the horner's toils and labors.

Many guild brothers were there and many others fine company was missed. All our horner brothers should consider attending this fine event in 1998. For information on being a juried participant, contact: Steve Marshall, Historic Mansker's Station, P.O. Box 1779, Goodletsville, TN 37072.

Report from Friendship

by Russ Young

Well, another typical June shoot--- floods and heat. Early in the week rains forced some camps to

relocate to drier ground. By the time we arrived on Thursday, the heat and humidity were both running about 98. Can't say that it was anything less than oppressive. It rained hard on the final Saturday night but Sunday broke so hot that our canvas was dry by 9 a.m. Following the trend of recent years, many traders began to leave on Saturday night and by mid-day Sunday, there were few businesses left open.

Period Horn Dye Techniques

by William A. Knight

[This text is excerpted from the Elephant Brand Black Powder web site: http://www.fastlane.net/~petro/knight/knight3.htm This is a great site for anyone interested in black powder and its uses.. Book mark it! They add new material from Bill as he submits it plus they have great links so check it on a regular basis.]

Man has long used mineral pigment dyes as a means of coloring items made from animal proteins, such as leather, fur, horn, wool, bone, antler. In addition to the decorative value, mineral pigment dyes provide varying degrees of protection against attack by insects and bacteria.

A mineral pigment dye is the acid salt of a particular metal; copper, iron, tin and lead were all used in period. To make one, react a metal with an acid, such as copper with acetic acid (vinegar). The object to be dyed was soaked or steeped in a solution of the mineral pigment. The dye would then permeate the protein. The dye is still water soluble at this point and must be made insoluble by "sweating" the item.

Sweating consisted of hanging the object in a chamber with steam. Acid-metal dyes break down between 150F on up to 212F. In the presence of air, the carbonate or oxide form of the metal is formed and this is insoluble. Because the dye is now insoluble and chemically bonded to the protein, it is not toxic to the user. They are extremely durable and do not fade in sunlight.

To perform decorative dyeing, complete all the work on the horn body, having to final shape, size, polish, decorated <u>but the plug not fixed into it.</u> The horn can't be dyed with the base plug in place. The horn surface must be clean and free of any trace of skin oil, which will prevent the dye from evenly penetrating.

By the 18th and 19th centuries, there were three copper dyes in common use for horns: copper acetate (verdigris), copper sulfate (bluestone or Roman vitriol) and nitrate of copper (copper nitrate). If you want to dye just a few horns, I would suggest copper sulfate; it is available in 1# bags at your garden supply store. Cupric acetate is difficult to obtain and more toxic to handle but it is the correct period dye. Copper nitrate is made by dissolving copper in nitric acid- dangerous to prepare and use but produces a deep, bottle green color.

A horn that has dried will not accept more than a surface dyeing, no matter how long it soaks in the dye bath. It is recommended the horn be boiled in clear water for several hours, which will drive the moisture into microscopic pores in the horn. The microscopic pores in horn are very minute

spaces that occur along the bundles of "hair" and along minute gaps between the layers, or laminations. You cannot boil the dye baths because the mineral pigments will break down.

Once placed in the dye bath, the dye will migrate into the areas which the clear water had filled. After dyeing, the horn will show structural detail patterns that were not previously noticable. Very plain horns show plainly visible structural details after dyeing.

It is difficult to give exact concentrations for the dye "stock solutions" to be added to a dye bath simply because of the wide variations in porosity exhibited by cow horns. Horns almost totally lacking in color will generally dye darker due to greater porosity. Horns with a white body will pick up little color in the white areas since the white pigment occupies void areas in the horn's microscopic structure.

When using copper acetate, try 4 ounces of copper acetate in one gallon of water. With copper sulfate, keep adding it until no more will dissolve (a saturated solution). In preparing the dye bath, add several ounces of vinegar per gallon as a "stabilizer." The acetic acid in the vinegar helps prevent the dye from converting to an insoluble form and aids in dye penetration.

The mixed dye bath *must be covered tightly at all times.* If it has unlimited access to air, a sediment will form (the pigment!). The water soluble metal will gradually convert to the water insoluble form as a carbonate or oxide as carbon dioxide or oxygen are absorbed from air in contact with the liquid surface. Vinegar will minimize this reaction.

After the dye bath is prepared, place the horn in the room temperature bath. Just how long to leave it is a matter of judgement; several days is a minimum. A good rule of thumb would be a week. After a certain point, no further dye will be absorbed.

When the dyeing is completed, the horn must be "sweated" to make it permanent. In most cases, the sweating is also required to give the proper color to the horn. When the horn is plucked from the dye bath, the pigment is still water soluble; if allowed to air dry, most of the pigment will migrate to the surface where it react with air to form insoluble oxides or carbonates. Sweating makes this conversion take place while the dye is still in the horn pores. How sweating is performed is sometimes critical in determining the final color of the horn.

The sweating chamber is simply a large metal bucket that is covered while being heated. The horn should not touch the metal; contact will result in spotting (some dyed original horns show this spotting, usually on the outside of the curve). Take a piece of scrap wood and taper to roughly fit into the base of the horn, leaving 1" or more protruding. This will make a stand for the horn, keeping it out of contact with the metal and holding it above the small amount of water used to generate the steam.

Put the horn in the bottom of the bucket, standing upright. Pour in enough water to cover the bottom of the bucket. Cover the bucket with two layers of aluminum foil, sealing tightly. Put the bucket on a heat source. The principle is to keep the air in the bucket saturated with water vapor while the temperature rises to about 200F, just below boiling. The conversion of the dye proceeds rapudly

above 150F, with 15 to 30 minutes being adequate.

Remove the now pliable horn and lightly press in the base plug. Don't drive the base in because the horn will shrink as it loses the water it gained during dyeing and sweating. Depending on the weather, it takes from two days to a week for the horn to return to a dry condition.

If a horn is "dunged" after sweating it will turn an olive green. The composting of animal manure was in period the only source of a wide array of chemicals known as "manure slats." The hydrogen sulfide, made by bacterial activity in the manure, modifies the bottle green color to a brownish olive green

Upcoming Events of Importance

The "World's Fair" of early arms and accouterments is Chuck Dixon's shindig, "The Gunmaker's Fair at Dixon's", held at his business in Kempton, PA. Many of our brothers are there as exhibitors, competitors and award winners each year. There is no other single event as important for learning about correct horn work than this! The seminars are non-stop on Saturday and form the University of the Eighteenth Century in your editcr's opinion. There is no camping but they will be glad to send a flyer regarding area motels & camping sites. Dates for this year are July 25th through the 27th. Call ahead and let them know you're coming, particularly if you wish to compete for the prizes: (610) 756-6271. Last year, Chuck received our first guild award for his numerous contributions over the decades to further horn work.

A new organization has been formed which may be of interest to our trade: the Contemporary Longrifle Association, founded by long time collector Gordon Barlow. The group is holding its first annual show July 31- August 2, at the Radisson-Airport Hotel, Cincinnati. You may get more information by calling Gordon at (540) 885-3200 [office] or (540) 337-7400 [home]. Although this organization has just gotten started, I note a goodly number of members, with several guild members. If you attend, please send a report for your humble editor to publish. The CLA has begun a web page at: www.com/cla.htm.

Several of our members have had good success (and much pleasure) in the past at the Fair at New Boston. This year it will be held August 30-31, at the George Rogers Clark Park, 3 miles west of Springfield, Ohio, where routes 3 and 369 intersect. Call 937-864-2526 for information. Bruce Horne's description of last year's event follows below.

Much publicity has been around for the "4th Annual Providence Plantation Colonial Fair," held 30 miles north of Pittsburgh at Evans, PA. They say in their advertisements:" This year a special call is made to sutlers, traders, and merchants to build up our exclusively period market place." "The period embraces the French and Indian War (1st weekend) and the Revolutionary War (2nd weekend) eras. A large N.W. Brigade of the American Revolution encampment is planned for the second weekend. English, Scottish and African colonials will entertain both weekends." Listen, you brothers who make Golden Age horns- this is a target market! You should immediately (you

need to be juried) call Carl Robertson at (412) 538-8818 for information.

And one which has been well publicized but I know nothing first-hand: Penn's Colony Festival, North Park, Allegheny Colony (10 miles north of Pittsburgh), Sept. 19-21 and 27-28. To quote one of their brochures: "A bountiful gathering of American Folk Art, 18th Century Reproductions and Traditional Cottage Crafts in Quality Handmade Gifts, Furniture and Decorative Accessories." They indicate 220 craftsmen displayed last year amongst 1,000 participants and 60,000+ patrons! Call now to get information before it's too late: 412-487-6922.

The New Boston Trade Fair 1996

by Bruce Horne

When I attend 18th trade fairs, they always seem to be teaming with activity and last year's New Boston Fair was no exception. They always have an abundant array of traders making it an 18th century buyer's paradise but the most alluring feature of New Boston is the amazing diversity of entertainment, including magicians, puppeteers, pickpockets, tinkers and musicians. This is a most enlightening experience for participants and spectators alike.

Over **200** exhibitor were present, such as blacksmiths & wheelwrights, gun makers, Windsor chair makers, wood turners, rope and cordage makers, weavers, indigo dyer, clothiers and drapers, snake oil salesmen, surgeon John Murphy (who offered free services to any volunteer), and of course, horners. Guild members included Roland Cadle, Lee Larkin, Mark Odle and Carl Pryor (if I omitted anyone, my apologies!).

Editor's Shavings

by Russ Young

Your President, Roland Cadle, has made confirmed plans with Davis & Elkins College in lovely Elkins, West Virginia, for our annual 1998 meeting, to be held the first weekend in March. The college will both feed and house us, for a very fair price. More information about making your reservations in the autumn issue of The Horn Book.

The last issue of he Horn Book was quite expensive (see report below). There were two non-reoccurring costs: the additional pages of the membership directory (more xeroxing and more postage) as well as the color page (which was 90 cents per issue). A few brothers have called or written to say they did like the color page- how about you? Your humble editor needs guidance and feed back from you. This is *your* newsletter- tell me what you want!

Your editor begs forgiveness the tardiness of this issue; he is preparing for the bonds of matrimony

in a few days and his attention is elsewhere... the next issue shall be printed in a timely manner.

I greatly appreciated the articles from Bruce Horne and Bill Knight. Come on, folks, send me more! Bill's article is a severe condensation of the full version on the Elephant Brand Black Powder web page. If you have world wide web access, you've *got* to see it.

Treasurer's Report

by Russ Young

As of 6/30/97, we have $667.21 in the bank. Since then dues for two members ($30) has been deposited.

The cost of the last issue of The Horn Book was: printing--- $185.93
postage--- 48.20
Total----- $234.13

A Fine Horn Working Video finally!

American Pioneer Video has just released a wonderful 2 hour how-to video by guild brother Ron Elhert, Duck River's most famous living 18th century gun maker. Ron walked away with a major ribbon for his horn at Dixon's last year and I will tell you from examining several of his horns, they are extremely fine work, especially the engraving.

There are several great "tricks o'the trade" as well as a lot of solid information. You can bet that the next horn I build will use several of his ideas. Ron does use power tools for parts of the construction but nothing unavailable in most home work shops. The only tool not in my shop (which is pretty rudimentary) was the tapered reamer.

Some of his methods will surely raise eyebrows of some folks, but remember that there are a lot of ways to skin a cat... for instance, I've seen half a dozen horners doing scrimshanding and all used different tools and methods. Ron's explanation of the various methods of scrimshanding was particularly satisfying to your editor.

As a beginner in horn work, there was a lot of valuable information and ideas for me; I will certainly use a bunch of them to complete an already in-progress "Golden Age" horn. Ron had figured out some much easier methods than I had...

If you follow his instructions exactly, you will produce a serviceable and historically accurate powder horn. This video has been needed for a long time and I'm glad that a qualified, experienced horner produced it. APV filmed it on 3/4 inch tape in a quiet class room setting so the quality is excellent. To order, call American Pioneer Video at 1-800-743-4675 and give them your credit card number.

The Honourable Company of Horners

is a guild of contemporary horn workers, mostly in North America, to encourage and further the art of horn work in all its branches. We hold an annual meeting with displays of historical horn work, current work by our guild brothers, seminars and demonstrations. The 1998 meeting will be held in Elkins, West Virginia, in April. Our membership includes historians, collectors and all levels of workers from rank beginners to masters. A guild newsletter, "The Horn Book" is sent 5 times a year to the membership.

The annual membership fee is $15.00, for the fiscal year beginning March 1st. The Check must be made out to: The Honourable Company of Horners. Complete the following form, enclose the check and send to:

Russ Young, Sec./Treas.
Honourable Company of Horners
Route 19, Box 89WY
Santa Fe, New Mexico 87505 USA

The Honourable Company of Horners

Membership Application for 1997-98

Name_____ **Date**_____
Business Name (if applicable)_____
Street Address_____
City_____ **State**_____ **Zip Code**_____
Telephone (home) _____ **(work)**_____
What level would you classify yourself? _____
What types of horn objects are you interested in?_____
Do you wish to be listed in the annual directory? **Yes** **No**

BROTHERS -
KEEP THIS TO PASS ON TO PILGRIMS.

RUSS