Wood Firing Journeys and Techniques

A Collection of Articles from Ceramics Monthly

With a Foreword by Dick Lehman
Wood Firing
Journeys and Techniques
Wood Firing
Journeys and Techniques

A Collection of Articles from Ceramics Monthly

With a Foreword by Dick Lehman

Published by
The American Ceramic Society
600 N. Cleveland Ave., Suite 210
Westerville, Ohio 43082 USA
CONTENTS

FOREWORD: It Is, After All, About the Wood, Right?  
by Dick Lehman ................................................................. vii

It’s All One Meditation by Gil Stengel .........................................................1  
Wood firer shares thoughts on teaching and creating art.

Wood-Fire Apologia by Jane Herold .........................................................9  
Reasons for firing with wood.

Magic and Ash by Barbara Campbell-Allen .............................................11  
Altering paper clay shapes in an anagama.

A Journey with Fire by Robert Long .......................................................14  
Reflections on the synthesis between wood firing and individual aesthetics.

A New Collaboration by Dale Huffman ..................................................19  
Exploring and working with the idiosyncrasies of a wood-fired kiln.

Larry Davidson by Lyn Kidder ............................................................24  
Self-sufficient New Mexico potter incorporates wood firing as part of a lifestyle.

Brian VanNostrand by Phyllis Blair Clark ..............................................28  
Thirty years of research, diligence, and determination.

Cary Hulin by Phyllis Blair Clark ..........................................................37  
Experiences in establishing a thriving pottery in Amish country.

Joy Brown by Rich Pomerantz ..............................................................44  
Unglazed sculptures reveal the influence of Tamba wood-firing experience.

Shiho Kanzaki: Extending the Tradition by Dick Lehman ....................50  
Modern Japanese potter relates personal journey in the anagama tradition.

Wood Firing in Maryland by Hollis L. Engley .....................................57  
Two potters construct a 65-cubic foot crossdraft wood-burning kiln.

Nanban by Isamu Mizoguchi .................................................................65  
The construction and firing of a 33-foot long snake kiln.

A Noborigama in the Colorado Mountains by Shelley Schreiber ........71  
A Colorado potter builds and fires a three-chamber noborigama kiln.

In My Own Backyard by George (Kim) Ellington .................................77  
North Carolina potter revives a local groundhog kiln tradition.

Beyond the Light of the Sun and the Moon by Dick Lehman ...............83  
Potter finds fulfillment in Japanese-style wood firing.

An Urban Wood Kiln by Sam Clarkson ..................................................89  
Advice on firing a wood-burning kiln in the city.

The Kiln That Consumed Elkton ...........................................................93  
by Howard Kiefer with Deborah Lipman  
Saga of a third-generation Japanese-American potter who inspired a community to help build an anagama/noborigama kiln.
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following Anagama Tradition</td>
<td>Estelle and Bruce Martin</td>
<td>98</td>
</tr>
<tr>
<td>Two potters share their experiences in firing an anagama.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Incredible Hog Chain Groundhog</td>
<td>W. Lowell Baker</td>
<td>102</td>
</tr>
<tr>
<td>Building and firing a traditional groundhog kiln in Mississippi.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digging a Hillside Kiln</td>
<td>Bryson VanNostrand</td>
<td>107</td>
</tr>
<tr>
<td>Virginia potter uses available materials (and some friends) to dig a kiln into a seam of clay.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Wood Kiln for the Lone Potter</td>
<td>David Swanson</td>
<td>110</td>
</tr>
<tr>
<td>Small wood-burning kiln that can be fired by one person.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn Island Kiln</td>
<td>W. Lowell Baker</td>
<td>112</td>
</tr>
<tr>
<td>Building a low-cost, portable, high-fire wood kiln in the Greco-Roman tradition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Kiln for All Reasons</td>
<td>Barbara Johnson</td>
<td>116</td>
</tr>
<tr>
<td>Throwing a kiln? Eight students and two teachers build a wood-fired kiln with thrown cylinders.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear Air</td>
<td>Gil Stengel</td>
<td>120</td>
</tr>
<tr>
<td>A discussion of traditional wood firing in the age of the federal Clean Air Act.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
It Is, After All, About the Wood, Right?

I had always hated Chinese elm trees. Could the powers of the universe have created a more unlikable tree? I thought not!

Too sparse to be called a shade tree, too leafy to be overlooked. A complainer of a tree, I think: remembering each wound, each scar, every nick and bruise, perpetually weeping from each of these traumas like an adolescent football player limping on each hurt, hoping to garner the sympathy of passers-by.

A trash tree, really: insidiously, incessantly dropping brittle little branches every season of the year, never resting, nor allowing a moment’s rest for the caretaker of any yard containing its species.

And why...why in the wisdom of the universe, would Nature have seen fit to program the physiology of these already unattractive trees with the biological imperative to have their massive trunks routinely split into two at a height of six or seven feet above the ground? Split, creating a crotch that collects rain and snow and wind-blown trash and rot, bugs and amphibians and reptiles and worms, bacteria and fungus and mold. Split, creating a most unseemly soup of smells—a crotch stench so unpleasant that even our children avoid the beckoning branches of these trees in the heat of the summer—a rancidity of such putrescence that the mere description would be so indelicate as to be an injustice to one’s sensibilities. Split, ensuring that ultimately, in some season of small storms, the lightest wind and rain will cause those two cloven halves of the tree to move so far in opposite directions that inevitably both halves will crash to the ground in resignation—in a wind that would cause an oak barely to sniff or wince or shudder.

And given such obvious inferiorities, who possibly could have thought it a good idea to import this Chinese cousin to the North American shores?

And back to you, Mother Nature, if I may for just a moment: why would you have imparted upon this wretched ensemble of mediocrities the power to procreate in amplitudes surpassing almost all other trees? How many billions of incessant little rice crispy seeds are indeed needed each year to ensure the survival of the species?
I never could forget the scores of ladder hours I had spent emptying my full gutters of soggy elm seeds. Nor would I ever forgive the seedy avalanche of the spring of 1996 that so clogged my gutters during an afternoon shower that my roof emptied its entire contents over the edge of my gutters, through my window wells, and into my basement. I came down the basement steps to spy a river of dirt and sludge that hosted hundreds of elm seeds blithely floating like miniature inner tubes across my basement, all seemingly oblivious to my distress.

And I would hate to calculate how many hours, days, and weeks I have spent pulling Chinese elm seedlings from flower beds and rock gardens and strawberry patches and fern gardens and patio cracks...tenacious seedlings with long, deep-worming roots. And how is it that only weeks after tilling my entire garden, I discover young elm saplings, tall as my waist, hidden by the tall-staked tomato plants!

And if the seeds and seedlings were not enough, consider how indiscreet a tree whose blanket of autumn leaves are, in their multitude, too large and dense to be allowed to remain upon the yard but, in their individuality, too small to be moved by normal raking.

What was Mother Nature thinking?

My disdain for these trees was further aroused when, upon moving to our new home, I discovered that the skinflinty landscapers, instead of planting the pagoda dogwoods, the American beeches, the contorted filberts, the Japanese maples, the flowering crabs, the chestnuts, the mountain ashes that this lovely property invited, had instead merely thinned out the natural insurgence of Chinese elms to a few prime “specimens”—and left us with the decades of consequences.

And so it was, years later, during one of those “seasons of small storms,” that five of these (now giant) “prime specimens” were felled by the slight breath of a springtime breeze and blocked our driveway, the road in front of our house, the side yard, but graciously spared our house and the kiln shed.

But then a dilemma: What to do with all that wood? Me, a wood-firing potter. I would have liked nothing better than to have those trash trees hauled off to some land-filled oblivion. But
both my pride and my pocketbook intervened—could I, should I, might I, dare I!—try burning this wood in my kiln before making the expensive decision to pay someone else to haul it away?

Begrudgingly, and with my moral tail between my legs, I decided first to try cutting, splitting, and burning before calling the “tree doctors.” But even in my resignation to these trees, they seemed to demand a final and demeaning last word, holding out until the very end; their stringy, sinewy, tentacled flesh resisted the forces of the wood splitter. Sinking the splitter’s wedge at 12, 3, 6, and 9 o’clock—and from both ends of the logs—the cantankerous chunks required my best efforts before finally resigning to my own stubborn will. Just how is it, I wondered, that a tree so weak, so easily felled by the lightest of breezes, can possibly be incongruously so strong and difficult to split?

I burned this wood I hated in my next firing. For 15 days I tossed into the firebox wood that however quirky had ultimately been true to its biological imperative (and subject to the particularities of the roughly 200 cubic yards of soil through which its roots had grown), wood that had quietly and steadily stored away in its bark and cambium layer a particular set of soluble minerals and salts. And as I burned this hated elm, minuscule amounts of these minerals and salts hitchhiked on the fly ash and began a journey through the kiln. The ash swirled and eddied around the pots, was lifted by the heat of combustion to higher elevations within the kiln, then, cooling a bit, began to descend through the pots and shelves, being inexorably pulled by the chimney’s draft to a small exit flue hole at the bottom of the kiln. And if, by some chance of the swirling currents within the kiln, the fly ash avoided direct contact with the pots, it exited the chimney and eventually returned to the earth to fertilize another generation (God forbid) of Chinese elms.

But some of the fly ash, during its dance among the pots, came in direct contact with the red-hot molten sticky pot surfaces, leaving the smallest imaginable trace of flux and hitchhiking glaze chemistry on the surface of the pots. And after 15 days, there began to collect a formidable swell of these glaze-making traces, emerging as an oozing sticky mass of improbable collaborators.

It was then as the pyroplasticity of the clay caused the clay to soften, as the natural ash accumulations melted and softened the contours of the pots, it was then that my heart softened as well. It dawned on me that these pots, fired with this fuel, were perhaps more mine than any others I would ever make: precisely because of the Chinese elm. These trees had patiently, over a series of decades, grown on my land, absorbed the nutrients and solubles from my soil, been subject to the seasons of my climate. Then, in the journey of the firing, these trees had given back to my pots the very solubles they had taken from my soil.
And the giving back was not unspectacular, ranging from white, yellow, gold, and pastel pink crystal formations to orange, green, brown, blue, blue-gray, and aquamarine glaze runs. Textures ranged from dry ash-encrusted deserts to glassy smooth pools. The Chinese elm ash deposits caused the topographical surfaces of my large-orbed works to appear as mountains and deserts and seas on some distant planet. What a remarkable paradox!

I no longer hate Chinese elm trees; they are now part of my technique. They have joined me on this wood-firing journey. I can no longer bring my heart to harbor them ill will, despite the quirky idiosyncrasies with which Mother Nature has endowed these hapless giants. Instead, I live in gratitude that reflects my passion. Gratitude, because wood-firing is, after all, all about the wood, right?

What follows is a remarkable collection of writings by and about contemporary wood-firing potters. These stories offer us an international glimpse of the techniques that motivate and the journeys that inspire these clay artists. But a deeper investigation may reveal to you that these writings, these lives, these works are about more than just journeys and techniques. These writings reveal passions that both express and give meaning to life and work. Listen, for a moment, to some of the words and ideas that grace these articles.

At times, it is clear to me that these authors are reflecting upon both the firing process and the pots themselves: We hear them speak of the soft sound of the crackling fire, their urgings to be inventive, to “think like the flame.” They convey their awareness of the community that exists among potters and the importance of bringing together a synergistic group of artisans. They confess a desire of “going beyond ‘common sense’ toward listening to the…voice of the fire and the voice of the clay.”

We hear expressions of hope that clay artists will be able to create work “with a voice of its own, something that can’t really be duplicated,” pots that reveal firing history through the “search for that synthesis between my own aesthetic and the fire’s.” One author confided that “truly good pots owe more to the generosity and spirit with which they are made.” Others disclose their conviction that the best pots “go beyond their grounding in intellectual understanding,” and become works that “enliven the spirit.”

At other times within these writings, it seems less clear to me: are the authors speaking about pots or life, or both? What is the focus of their reflections about beauty, pleasure, sensuousness, hope, and wistfulness? And of what are they speaking when they mention collaboration, teamwork, hospitality? The rich intermingling between work (noun) and work (verb) invites one to fantasize for more than a moment with “power and sophisticated beauty,” “a
means of exploring relationships,” or “focus tempered with affection.” Is it descriptive or autobiographical when we read of technique following one’s heart and soul, “overcoming difficulties as a revelation of true beauty,” or the blushing confession of “an indescribable difference in soul?”

And finally, I have come to the inescapable conclusion that at times these writers are speaking of an inextricable synthesis of pot and process and person: I hear these echoes: “I can shape the life I create,” “pleasure in everyday living,” “an expression of one’s self and one’s values,” all of life as “one meditation,” and “discipline which allows the spiritual, physical, and emotional parts of life to balance and integrate...to become more whole...to discover what life is all about.”

Other authors are even more bold, describing this synthesis as “not being bound...by the definitions of common sense,” works and work and life that go “beyond the light of the sun and the moon” that are simply “an embarrassment of riches,” for which there is nothing but gratitude!

These wood-firing potters grace us with a glimpse of the passions that inform their technique and journey. In the words of my dear friend Mr. Shiho Kanzaki, “As artists, it is our responsibility to always pursue a better thing.” Indeed the passions are the journey.

—Dick Lehman
When I was a young man studying ceramics at the University of Louisville, Tom Marsh used to read to the classes quite a bit. One day he was reading some prose by Gary Snyder. I can’t remember the book now, or the exact reference, but in this excerpt, Snyder was talking about his experiences in a Zen monastery in Japan. It seems that one of Snyder’s jobs was to work in the monastery vegetable garden. After a few months, he realized that with some changes the garden could be more efficiently worked to provide more free time and higher yield. He proposed these changes to the monk in charge of gardening and was rebuked.

The monk said something along the lines of: “Why do you want to make the gardening more efficient to save time? You will only have to spend that much more time meditating and your knees will hurt more.”

The lesson the monk wished to impart to Snyder was simple, really: Whether he was working in the garden, praying, studying, eating or sleeping—it was all the same thing. They were all one meditation.

A few years later, I went camping with my brother-in-law in Kentucky’s Red River Gorge. Over a few whiskeys around the fire, he posed a question that he at first would not answer: “What is the true way of Zen?” It took a few days for me to drag this answer from him. I will never forget it. “Eat when you are hungry. Drink when you are thirsty. Sleep when you are tired.”

I cite these two stories from my
Journeys and Techniques

early adult years because they have helped shape the man I am today. I have striven until the sweat poured from my body to make all things “one meditation,” only to find that the answer is elusive, couched probably in the act of striving.

When I was younger, I had this naïve idea that “one meditation” meant living in the woods and silently moving from task to task in a perfect studio, achieving some state of tranquility where the world was tuned out and had no meaning. I even created that place and tried to create that very life, so deep was my conviction and my naïveté. I hoped that working in clay would bring me closer to what both stories represent.

I have since learned that my entire life is the clay, that simply choosing a trade had little to do with the truth I sought. If all is one meditation—and I believe that to be true—then how is working in clay any different than working on a turret lathe? I don’t believe the two are different. I don’t believe that I (or any other artist) am any different than anyone else walking down the street, scratching him- or herself, living one meditation.

I’ve spent a lot of time talking to my students about a standard. Somehow, living one meditation and knowing one standard are connected. I’ll try to explain: In *A Potter’s Book*, Bernard Leach proposed some very explicit ideas about setting a standard in pottery. He spoke to this point very eloquently in the chapter “Towards a Standard.” I have been thinking about that standard for many years. Standards of beauty pervade every part of my life. When I talk about standards to my students they all want a definition, a formula on how to meet these standards; however, the concept is not so quickly attained.

There is a movie on Shoji Hamada and Bernard Leach that was filmed in 1974. I’ve seen that movie, *Art of the Potter*, probably close to a hundred times. Tom Marsh used to show it every semester to every class, and I do the same at Western Illinois University. In it there is a brief section where Hamada is being interviewed and in English he says quite clearly (I know because I rewound this part three times): “Some people try to measure the standard with a rule. That is a very big mistake.” That is as good an explanation of how to define this standard as anything I have ever heard or read.

Now, here is the funny thing—I’ve watched that movie countless times. I know the dialogue so well that I’ve even parodied parts of it with friends. Yet I first really heard those words about a year ago. Why is that? I was literally floored and almost wept with relief on hearing those words; they were like a soothing hand on my troubled brow.
Yet I had to watch that film a hundred times to hear that sentence. Why? Because my life is the clay. I can't hear what I am not ready to hear. I can't hear something I can't understand. For some reason, I had to be 37 years old in an old gymnasium on the campus of Western Illinois University to hear and understand those words.

How can I teach these things to my students? I cannot tell them the things they are not ready to hear. Their lives are the clay. They are no different than I. I don't have a formula for explaining a standard to them. They have to live their lives and know this in their own way. The concept doesn't fit higher education; it isn't multicultural, politically correct, paradigm-shift material. It is a simple fact of living your life, of gaining experience, of working hard on whatever presents itself. I would love to be able to simply write down what that standard is, but the best I can do is relate one curious experience I have had that has helped me to know it.

I have a friend in Davenport, Iowa, who is a student in clay. He comes down to help fire our wood-burning kiln. He's hooked, you see. You've seen it, felt it—you know what I mean. He has come to clay later in life than most, but he has an advantage over younger students in that he has already learned living and is ready to learn seeing. We have had some long conversations about standards. These conversations grew out of my telling him about a teaching experience I had where I had offered a student some criticism of a technical nature—you know, change this foot so, lower this form break, etc. After the critique, the student immediately said, “Well, that's just your opinion.”

I have tried to explain to my friend in Davenport and to my students that no, this is not simply my opinion. I didn't just make it up on the spot, pull it out of thin air.

Let me offer an example from my days as a student pilot: You are in the front seat of a glider, instructor behind,
and you are on final approach to land. You do a reasonable job. After all, you make it down in one piece, are able to walk away, as they say in flying. But your instructor isn't done. He's criticizing your handling of the airplane. You trimmed your landing pattern inappropriately. You pulled spoilers too soon. You were too low over the trees on final, etc. Is this just his opinion? Did he make this up? Given the same combination of mistakes under different conditions, and you might very well find yourself dead.

Similarly in pots, is a standard merely opinion? Is the pot alive or dead?

I was recently invited by Dan Anderson at Southern Illinois University in Edwardsville to participate in some critiques and show slides afterward. Now this for me is an intimidating thing. I'm not the most eloquent or verbal person in a critique. I admire those who seem to effortlessly know and understand the work before them. Me, I have to wrack my brain. It's exhausting.

I remember one student in particular who had put out both pots and sculptural pieces. I asked him, "Why this dichotomy in your work?" I thought I was being smart. Dan Anderson stopped the whole show and explained to me very patiently that dichotomy was explicitly encouraged at SIUE. It seems he doesn't think there are enough pots in the world, that students learn just as much about working the clay and the sculptural issues therein by making pots as making anything else.

Well, there are experiences and there are experiences, but right there I felt like someone had hit me on the forehead with a 2×4. Why couldn't I see that all those years? In my own work, I had worried about going back and forth from large sculptural vessel forms to intimate porcelain teapots. I had always assumed that this split personality in the studio was a bad thing, and here someone was calmly telling me that no, this is the thing. I

Large vessel, 35 inches in height, wood-fired stoneware.
I had a period about seven years ago where it seemed that the forms I was making were starting to click. I don't know why, but for about a year in my studio in Kentucky, for no reason that I could see, my pots just seemed to come together a little better than usual. I hadn't experienced such a time before (or since) and I have continued to draw on the library of pieces I designed during that period. Just recently, I've started to design some new forms again, but I haven't achieved the flow of work that I seemed to tap into then.

Usually, when I see a surface that speaks to me, I immediately think of how I can work one of my forms to take advantage of that surface. I'm always looking for surfaces, usually from some area of the kiln that is perceived as a problem. This sort of design exercise is what gets me out of bed in the morning. As I alluded to earlier, I have a tendency to go back and forth in the studio, first working a long run of large-scale coiled-and-thrown vessels, then moving back to smaller, more intimately scaled utilitarian pieces.

I use a heavily grogged stoneware body for the large work. I purchased some 4- and 5-mesh grog from A. P. Green. It's great but is very hard on the skin when thrown; however, I've found this to be the best insurance against losing large pieces in the firing. I like the texture, too.

The following are some clay and glaze recipes I use in the studio. I'm not very particular, but these seem to work well here in western Illinois. I try hard to take advantage of the materials and kilns that are available.

### WIU Class Stoneware Body
(Cone 9–10)
- Custer Feldspar .................. 16 %
- A. P. Green Fireclay ............. 25
- Cedar Heights Redart .......... 6
- Kentucky Ball Clay (OM 4) .... 15
- Yellowbanks 401 .................. 25
- Flint ................................... 13
- Sand .................................. 85.5 lb

Add sand or fine grog “to taste.”

### Yuki's Brown and Round Body
(Cone 9–10)
- A. P. Green Fireclay ............ 30.0 lb
- Cedar Heights Redart .......... 12.5
- Kentucky Ball Clay (OM 4) ... 7.5
- Edgar Plastic Kaolin ............. 5.0
- Yellowbanks 401 .................. 7.5
- Flint ................................... 15.0
- Sand .................................. 8.0

85.5 lb
Grolleg Porcelain Body
(Cone 9–10)
Custer Feldspar .................. 18  %
Grolleg Kaolin .................. 55 
Flint ................................. 14 
Molochite 200 .................. 8 
Pyrophyllite ........................ 5 
100%  
Add 2% bentonite, blunged in water.

Seaslug White Glaze*
(Cone 9–10)
Bone Ash .................. 2.04  %
Talc ................................. 7.14 
Whiting ........................... 19.39 
Custer Feldspar ........... 32.65
Edgar Plastic Kaolin ....... 9.19
Flint ................................. 29.59
100.00%  
Add: Titanium Dioxide ....... 3.06 
%  
*courtesy of John Neely

Shown above is a drawing of the wood kiln I constructed at Western Illinois University. I’ve reworked the ratios of this design several times and built it with a different configuration of arches once before; that version combined a catenary and sprung arch but retained the same cubic feet ar-
rangement and ratio of chambers to firebox area.

The WIU version is fired in about 35 to 40 hours, using sawmill scrap. I particularly enjoy stoking at 4 AM and watching dawn break. I sometimes try to cook breakfast for the crew. Like me, most of them are never normally awake at such an hour.

Currently, a section of our wood kiln appears to be causing the clay to trap carbon; at the same time, the salt is hitting the wood ash and, combined with the clay underneath, is turning yellow. I think this has potential. The combination is dramatic; however, it is difficult to make a piece strong enough to stand with this wild surface. The yellow and gray combination blows your eye away, and you miss the form.

If someone were to force me to pick just one narrow area in which to work for the rest of my “clay life,” I would probably choose salt-fired porcelain. I like the way salt freezes the action of clay in a potter’s hands. There is an endless subtlety to the movement of fingers through porcelain that I never tire of seeing.