

# TIMBER FRAMING

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*Voyage  
in  
Japan*

Ben Brungaber



*Rendezvous '96:  
Dolly Copp  
Pavilion*

Will Beemer

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# BOOKS

## Long Wooden Bridges

*The Colossus of 1812: An American Engineering Superlative*, by Lee H. Nelson. The American Society of Civil Engineers, New York, 1990. 8.5 in. x 11 in., 62 pp., illustrated. Softbound, \$25.

THE Colossus of 1812 was an immense single-span wooden bridge that crossed the deep and tidal Schuylkill River at Philadelphia, Pennsylvania. A consortium of businessmen had solicited proposals and received several, some practical and some fantastic, but only Lewis Wernwag proposed to cross the river in a single bound, using a trussed wooden arch. The bridge he built was enormous, 340 ft. of clear span, averaging 36 ft. in width. At this size, six of our Guelph Bridges could be parked on the Colossus. It weighed over 1 million pounds and contained almost 200,000 board ft. of timber, mostly white pine, in the frame alone. The grillage in the mud under the stonework of the west abutment, also built by Wernwag, consumed an additional 275,000 board ft., mostly in the form of logs. The Colossus remained in heavy use, widely admired at home and abroad, until destroyed by fire in 1838. Our contemporary and even historic creations are delightful to us as North American timber framers, but they must be considered small potatoes compared to the barns, cathedral roofs and great halls of the European Middle Ages. The exceptions are the great wooden bridges of the 19th century; they were the largest, most daring and most structurally sophisticated timber creations in history.

The author of this monograph, the late Lee Nelson (1927-1994), was a historical architect whose career with the National Park Service began in 1958. His contributions were great, and many of us are familiar with his publications on dating buildings through nail chronology. He brought to the Park Service and to historic preservation in general a new emphasis on construction technology, particularly timber framing, and historic craft processes. Active and enthusiastic to the very end of his life, he had just completed an article on early wooden

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truss connections, which I was given for pre-publication review in 1993. The article has since been published in the *Association for Preservation Technology Bulletin*, vol. XXVII, no. 1-2, 1996, and is worth the attention of anyone interested in timber framing.

Lee's book on the Colossus is remarkable for its depth of scholarly and documentary research combined with an understanding of the mechanics of timber framing. He sets the construction of Wernwag's bridges and the other great wooden spans of the late 18th and 19th centuries in their historical context. He discusses the famous bridges built by the Grubenmann family in late-18th-century Switzerland, some of which approach 200 ft. of clear span. He believes Wernwag may have seen engravings of these bridges but was not inspired by them. Nelson proposes what he calls an American track in bridge design, exemplified by the work of Timothy Palmer, Theodore Burr and Lewis Wernwag. "Structural design clarity" is the term Nelson gives to what separates American truss design from its European predecessors, which he feels were burdened by overly complicated carpentry and joinery, in which a multiplicity of smallish members intersect each other.

In my opinion, the same clarity begins to show itself around the same time (ca. 1800) in American church steeple framing, which I separate into the old complex framing (see the mid-18th-century Christ Church in Philadelphia) as opposed to the telescoping steeple framing appearing throughout the Northeast by the 1780s.

Nelson also finds it notable that Wernwag, as well as Burr, placed great dependence on laminated rather than scarfed timber members, particularly for long arches and chords. We are not talking about glue laminates but rather large baulks of timber (6x14 in. chord lamina, grouped in sixes, on the Colossus) ganged into groups by either wooden shear blocks or iron spacers, hangers and bolts to make large and long continuous members. In addition to eliminating scarf joints, Wernwag gives further reasons for the superiority of his lamination design:

"The dry rot is entirely prevented by the timber being sawed through the heart, for the discovery of any defect & kept apart by iron links & screw bolts without mortice or tennon, except the king posts & truss ties. No part of the timber comes in contact with each other, & can be screwed tight at any time when the timber shrinks. Any piece of timber can be taken out & replaced if required without injury to the superstructure."

Ithiel Town, in the 1820s, makes some of the same claims for his lattice truss bridges, that is, 3x11 stuff can't conceal much rot and is easily replaceable.

The Colossus contained 11 tons of cast iron and almost 50 tons of wrought or bar iron, all in the form of bolts, links, shoes and tension rods. While we often think of them as all-wood structures, most of the patented bridge designs were at least bolted together, and some, like the Howe, had

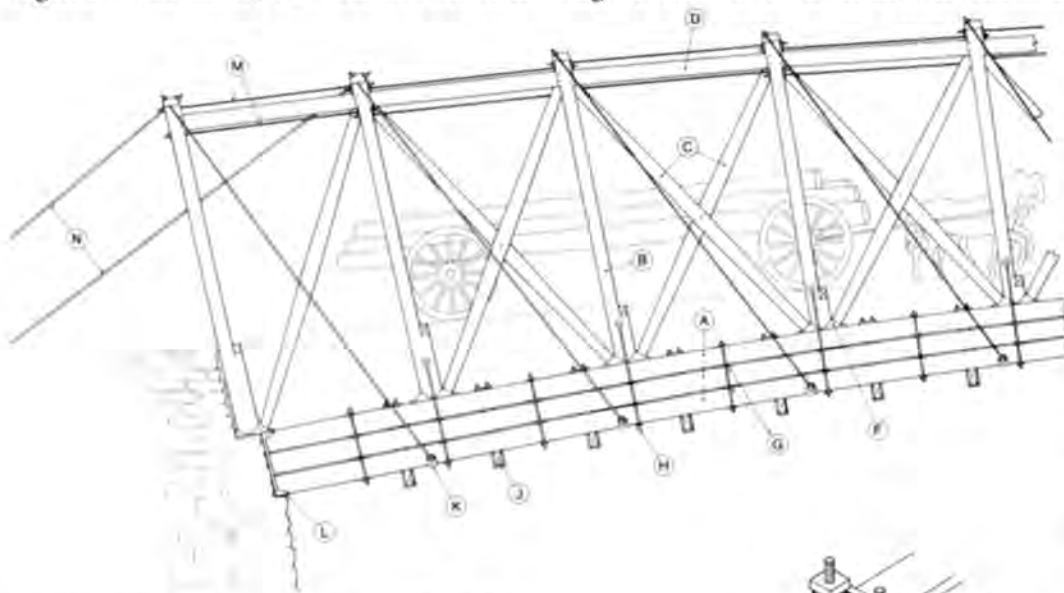
bridge ought to work and provides some insights about the direction of forces that aren't obvious from looking at an elevation of the frame. In addition, there are numerous figures illustrating construction details that show the creative genius of Lewis Wernwag. At 340 ft. in the clear, the Colossus

may have been the longest single wooden span ever built. The title is usually awarded to Burr's McCall's Ferry Bridge over the Susquehanna, reputed to have spanned 360 ft., but since it only lasted from 1817 to 1818, when it was destroyed by ice, little is actually known of it. Palmer built a 244-ft. single span over the Piscataqua near Portsmouth, N.H., in the 1790s but later expressed doubts about the wisdom of this scheme and suggested that wood trusses not exceed 200 ft. in the clear. Burr, before and after McCall's Ferry, commonly spanned around 200 ft. with great success. Nicholas Powers' 1854 span at North Blenheim, N.Y., is still comfortably stretching 228 ft. and is the longest single wood span in the world. Of the great 19th-century railroad bridges, few exist to look at, but we know that the Cascade Creek Bridge in upstate New York had a single arch span of 250 ft. Wernwag claimed he could do 500 feet in a single span, but no one ever took him up on it. Will we ever get timber frame structures like this again? It will be a miracle if we do.

Lee Nelson's book is eye opening and gives us an idea of how much fascinating material about missing structures can be acquired by a diligent researcher with an experienced eye. Are there failings in the book? Not really, but perhaps some possibilities are not explored because no one person knows everything about historic framing techniques. For example, in his discussion of how curved timber was acquired, Nelson discusses bending as opposed to cutting or hewing to the curve, opting in favor of the latter based upon documents from another of Wernwag's bridges. The usual way curved timber was acquired for arches in bridges of the period was by finding naturally curved logs with a certain amount of sweep and then hewing to exactly the curve required. This process is described in some lumber lists and can be seen in existing early arches.

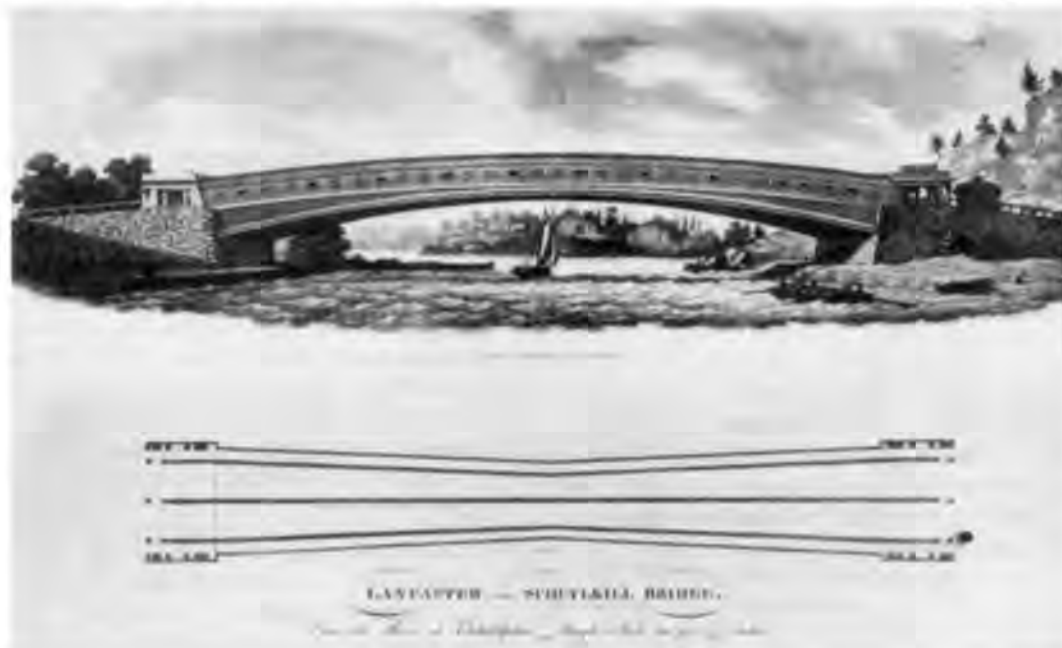
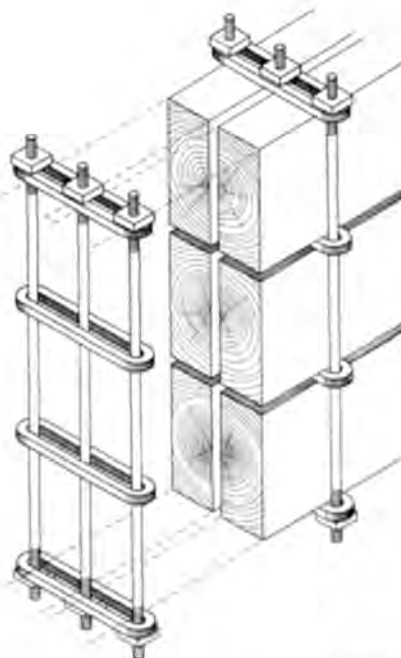
I also wish more space had been devoted to the erection of this colossal structure over a deep tidal river with a muddy bottom, but we are told only that it was erected upon scaffolding. How this scaffolding (also called centering or falsework) was supported and erected was probably more complicated and risky than the construction of the bridge itself and is at least half the battle in such a project. Burr's McCall's Ferry Bridge was meant to be floated into position but ended up being dragged across an ice jam. My guess is that little or no evidence was left about Wernwag's rigging.

I recommend this book highly. The Colossus may have been the greatest accomplishment in timber ever constructed and is a rarity for how much is known about it. It will be of great interest to framers, engineers and historians. You can get it from [loftybooks@aol.com](mailto:loftybooks@aol.com). —JAN LEWANDOSKI



metal verticals. Only the Town plank lattice, and perhaps the little-used Haupt, could be built with only wood members and fasteners in the truss. Ironically, as the 19th century progressed, the all-wood Town became more prevalent. Its high rate of survival may have something to do with the tendency of metal to condense moisture onto its surrounding material. The Town also was largely free of both scarf joints and mortises. I believe the concern these builders had was not with the concept of the joint but with the tendency of mortises to collect moisture in exterior applications, as well as the expense of cutting joinery.

Nelson's book includes force diagrams and a "Statics Discussion" based upon a computer analysis of the structure of the Colossus. The analysis determines that the





# Guild Rendezvous 1996

**M**ERLE BROWN, Adam Hodge and Charles Thurston didn't attend the Guild's Rendezvous this year, but if they had, they would be smiling. Sixty years ago, these three signed a note as leaders of the Civilian Conservation Corps crew building the Dolly Copp Picnic Pavilion, slipped it into a Prince Albert tobacco can and stashed it in a nook behind a timber. Their note was on display as 40 Guild members and their families came to Pinkham Notch, New Hampshire, for two weeks in July to restore their handiwork to its former glory.

C.C.C. buildings can be found on public lands throughout the country and were built in a common style combining log walls, pièce-en-pièce and post and beam, which established an architectural identity for the U.S. Forest Service. Between 1933 and 1942, the Corps built over 4,000 buildings in Oregon and Washington alone, from fire lookouts and administrative facilities to recreational structures. It's estimated that in 1990 only 800 remained standing, and by 2005 fewer than 300 would remain. The Corps also planted trees and built roads, bridges and dams, but more remarkable are the people who did the work: mostly teenagers using only hand tools and camping in remote locations. The program was started in the Roosevelt administration during the Depression as a means of creating jobs, with Army equipment and leaders overseeing youngsters recruited from the nearby towns. Over 30 C.C.C. camps were located in New Hampshire. Each member of the Corps would receive \$30 monthly, of which \$5 went into his pocket and \$25 went home to the folks, who were required to spend the money on either rent, clothes or food. By all accounts, the experience was very positive for those who "went in as boys and came out as men." There was camaraderie working in the great outdoors and, based on the quality of the scribe work we saw in the pavilion, skills were learned. It would seem a good model for modern programs such as Americorps.

Around ten C.C.C. veterans visited the site during the reconstruction, and one, Belvin Barnes, was extensively involved in the original building and proved to be a valuable source of information and encouragement. The pavilion, along with a larger enclosed building now used as a visitor center across the river in the Dolly Copp Campground, was built by the same crew over two years and completed in 1936. The rustic log structure covers a mortared stone slab approximately 23 by 61 ft. The center section has two 5-ft. extensions on the long sides, creating a cruciform plan. The sides are all open except for the western extension, which contains a large mortared stone fireplace with log walls on either side. The



Photos Will Beemer

*Above, restoration work nears completion. Below, Dolly Copp Pavilion stripped for assessment. A substantial portion of the original structure was preserved.*



roof structure is a series of log trusses with a 7 in 12 pitch, each as wide as the building. These trusses support principal purlins and crossing ridges; common log rafters run from the ridges to doubled top plates at the walls. This entire assembly rests on 12-in.-diameter log columns and is covered by a roof of wooden shingles. Since the thirties, its fireplace has warmed family reunions, weddings and innumerable picnickers, and the site became a sentimental mainstay in the lore of the nearby towns of Gorham and Berlin.

In the 1970s, the original roof of cedar shingles on strapping was replaced. Either through ignorance or a shortsighted attempt to get by with a low-bid job, the contractor doing the replacement substi-

tuted aluminum flashing in the valleys for the originally specified copper. Before long the valleys began to leak as the flashing deteriorated and rot began its inexorable damage to them and the plates and posts at their feet. The post feet were also placed directly on concrete pads at grade, which caused the bottoms of most posts to rot. Meanwhile, the unprotected roof truss at the south end of the building was showing the strains of exposure to the sun and the considerable storms that frequent this region in the shadow of Mt. Washington. A variety of wildlife had taken up residence in the hollow bottom chord. In 1992 the Forest Service finally closed the building to public use.

The Forest Service needed to decide if it should remove, rebuild or repair the Dolly Copp Picnic Pavilion before the deterioration advanced further. Initial surveys estimated that as much as 40 percent of the building was beyond repair and would need replacing. Based on the building's eligibility for listing on the National Register of Historic Places and the overwhelming response of local citizens, the Forest Service made the commendable decision to preserve and maintain the structure, keeping as much of the original fabric as possible. The problem then became one of financing the restoration, which would cost between \$50,000 and \$90,000 depending on the amount of volunteer labor and donations that could be garnered. The Forest Service alone (and ultimately the taxpayers) did not have the means to finance a full repair by a paid contractor. The building would have to come down unless a creative way was found to come up with the resources.

Guild member Curtis Milton lives in the area and began discussing the project with Forest Service personnel, in particular Nita Williams. The two realized that the Guild's educational focus, talented membership and history of public projects made a partnership very attractive, and a 1989 precedent of cooperation existed between the two organizations. Curtis wanted to make Dolly Copp (named after an early New Hampshire settler, the remains of whose homestead are in the present-day campground) an event that would incur no costs to Guild members and their families, using our existing skills instead of charging tuition to learn new ones. The Forest Service, too, had much to offer: a beautiful campground next to the site and a very supportive community ready to contribute what it could.

The catalyst came in the form of a *challenge cost-share agreement*, a relatively new mechanism through which government agencies can form partnerships with other organizations. Rather than put the pavilion restoration out to bid to outside contractors (the normal procedure for government jobs), the Forest Service can place a value on the contributions of the cooperator (the Guild's coordination of the restoration and volunteer labor) and then provide matching funding to complete the job at a fraction of the cost. In the case of the pavilion project, the Guild's labor (40 people for two weeks) was valued at \$46,000; the Forest Service then found it possible to come up with \$49,000 in their budget to pay for coordinator salaries, other subcontracted labor, food and materials. A job originally estimated to cost around \$90,000 was now projected to cost around half that, thanks mostly to the generosity of Guild members taking their busman's holiday.

This arrangement was attractive enough for the Guild Board of Directors to approve taking on the project. The setting seemed perfect for the third annual Rendezvous, a concept originally put forth by Doug Lukian for Guild members and their families to camp, build and play together for a longer period of time than the conferences allow. The spectacular scenery of the White Mountains, along with other local attractions, promised to keep family members entertained, and the time frame of mid-July seemed ideal for a vacation in New Hampshire.

The call went out for coordination help to organize the reconstruction. Glenn Diezel, Doug Lukian, Mike Goldberg, Reed Leberman and Mikkel Johansen agreed to serve as team leaders.

Guild President Joel McCarty and I would handle site and camp logistics and public relations; living in relative proximity to the site enabled us to make a number of visits in advance. Curtis Milton maintained his role as project coordinator, assuring that tools and materials were at hand when needed. Rounding out the administrative crew were three cooks, Michele Beemer, Debbie Goldberg and Susan Norlander, who would maintain a seemingly constant flow of food and refreshment to the entire camp and site while also braving the summer tourist traffic daily to shop for groceries.

NITA WILLIAMS and her Forest Service aides were on top of their preparations, and anything we suspected we might need seemed to materialize in short order. Even the T-shirts were ready a month ahead of time. Not only were her resourcefulness and efficiency impressive, the amount of donations she was able to solicit seemed to snowball as the project neared completion. It seemed that once people got on board, no one wanted to be left out. This was a great lesson in how worthy, underfunded projects can get done with a little legwork (and arm twisting). While the Forest Service provided the logs for the reconstruction, local businesses and individuals donated services, material and equipment: crane time, scaffolding, storage trailers, concrete, tarps (most useful, it turned out), firewood, virtually the entire camp kitchen (stoves, coolers, refrigerators, tables, BBQ), ice and food. In addition, many local tourist attractions pledged free or discounted tickets for Guild members and their families during their stay for gondola rides up Wildcat Mountain, tours of the Mt. Washington Observatory, mountain bike rentals at Great Glen Trails, admission to Storyland and Heritage New Hampshire and even fly fishing lessons from North Country Anglers. With the Forest Service reserving an entire end loop in the Dolly Copp Campground for us (one of the largest in the national system) and setting up charge accounts at the local groceries, preparations seemed complete well in advance.

In May, a Forest Service crew removed the roofing and strapping from the pavilion, and for the first time we could get a look at the real extent of the damage. While the rafters and purlins seemed in better shape than anticipated, the valleys, plates and some truss parts, posts and railings needed to be replaced. The bottom course of logs in the walls surrounding the fireplace would also have to go, along with the bottom 6 in. of all the posts, which would then be reset on new raised concrete pedestals. Curtis and Reed completed this inventory and shot elevations in early June, then helped the Forest Service scale the trees for cutting the timber. Pat Williams (Nita's husband and timber sale administrator for the district) was responsible for finding these trees for the pavilion repair and was excited to discover their history. It turns out that the same C.C.C. crew that built the pavilion had planted a stand of Norway spruce in a burned area a few miles north, and these trees were now the right size to be used for the reconstruction. (Norway spruce, not a native species, was planted extensively in the thirties throughout the Northeast because of its hardiness and because it was the only species available at the time. The saplings came from nurseries overseas, such was the magnitude of the planting frenzy at the time.) Three days after felling, more than 90 logs were peeled by volunteers at the site. The native red spruce used in the original building is now disappearing fast from the White Mountains because of its intolerance of pollution, mainly acid rain.

Guild members began arriving in camp on Friday, July 5, and everyone took a survey of the pavilion before dismantling. Early Saturday, with a crane donated and operated by local timber framer Tom Stryker, the dismantling began with each piece sorted, stacked and marked using a labeling system developed by Forest Service engineers. All upper members were removed by the crane by dusk, with the posts, railings and some plates left in place until Monday morning to orient later arrivals. The next order of busi-



ness was to improve access to the building site from the campground. Normally this entailed a two-mile drive out through the campground and back up busy Highway 16, but a much shorter route across the Peabody River would link our campground loop directly to the pavilion site. Moderately high water required building a 60-ft. bridge, but the materials and expertise were at hand. On Sunday, a dozen people began erecting cribbing on suitable boulders in the river, then stringers, joists and planks were placed and all pieces lashed together. After seven hours, a beautiful, serviceable temporary bridge with rope handrails was completed to the delight of many campers and kids.

On Monday morning, 30 people gathered at the site to map out a strategy for rebuilding. The team leaders discussed and took suggestions as to how the building was originally laid out and if we needed to replicate the C.C.C. approach. While there were some indications and educated guesses that the roof pieces were scribed in place, the consensus was that we should scribe the roof system on the ground. There were doubled top plates with a presumably level flattened surface between them. It was predicted that we could use this flat surface as a benchmark, scribing the new posts to the lower top plate and tipping them up, then leveling an area in front of the pavilion to set the upper top plate on and scribing the roof structure from there up while working at a convenient height. The roof could then be assembled in place in short order.

Four distinct crews began working at different areas of the site, and it was amazing (as usual) to see the wordless cooperation with which people anticipated what needed to be done. One group began cutting the post bottoms and scribing in new railing material, a relatively simple job that proved a worthy initiation to those new to the skill. A few days after these 5-in. round mortises were roughed out with drills and finished, Belvin Barnes would reveal the existence of the ratcheting T-auger with 5-in. hole saw he used for the same job 60 years ago. Yes, he knew exactly where it was, stashed away in some Forest Service closet, probably untouched since 1936.

Another crew set up the level area for the roof system and started scarfing the long plates, while another checked and shot new elevations on the timbers still standing for the benchmarks that would serve as the reference planes. The last crew attacked the log wall surrounding the fireplace. Since the log ends were mortared in and we didn't want to risk disturbing the masonry, most were left in place. The bottom course of logs had to be removed because of rot, so the entire wall was jacked up slightly and cribbed. Later a stone stem wall would replace the bottom log course. Much more work remained at the other end of the log walls, however. Water coursing down the roof poured down the valley posts after the flashing deteriorated, and the log ends around the fireplace butted into these posts. Much of this end grain was no longer there, and a number of days were spent cleaning and drying out (with acetone) the hollow ends before work could proceed in that area. A rather volatile surface consolidation treatment was applied and pressure-treated plugs were made to match the voids (some up to 6-in. diameter and 12 in. long). These were then epoxied into place.

Finally, some upper logs in the walls where the valleys landed had to be replaced. This juncture was the focus of a lengthy discussion on avoiding future decay problems. Since the doubled plates were at the same elevation all around the building, the



*At top, John Palmer (flowered hat), Mike Goldberg (hat but no shirt) and sheik Tom Miller (waders) lash underpinnings for Peabody River Bridge. Above, Joel McCarty smooths the way.*

corners required saddle notches that took almost all the material out of the center member. In addition, both main and crossing ridges started out at the same height at the gable ends, but the two pieces of the crossing ridge inexplicably dove under the main ridge, with the joint supported by hardware known as the Mobius Strap.

So even though the building was, incredibly, only 1/8 in. out of level at its ends, a combination of decay, undersized timbers and lack of tying members in the crossing contributed to the sagging in the middle. We decided to upsize the ridges and valleys. This distributed more of the load to the peak (and then to the trusses) and down to the posts directly, thus lessening the weight on the cantilevered purlins supporting the middle of the valleys.

By the end of the first week, post pedestals had been poured and posts, railings and plates were in place. As work progressed, Belvin Barnes regaled us with stories of the original construction of the pavilion. While we were drawknifing the smoothly peeled logs to match the faceted appearance of the originals, we wondered if the '36 crew had resorted to drawknives because the bark didn't peel easily due to a late harvest. Belvin explained how the familiar "Forest Service Brown" stain would penetrate and adhere better if the cambium was removed deeper than just peeling allowed. Upon seeing the fancy scribes in their hardwood cases reverently brought by some of the crew, he described how his team went to the edge of the clearing and found forked branches into which they mounted their pencils. Their eyes and equanimity had to suffice instead of bubble levels. One of his most vivid memories was trying in vain to set the keystone over the fireplace opening. Something kept it from settling into place. A voice from behind him said, "Can I help you, young fella?" Then this old-timer took the trowel from the 15-year-old Belvin, grabbed some mud, stood back and hurled it at the void where the keystone was to reside. "Gotta get the air outta there," he explained as Belvin put the stone neatly to bed.

Belvin also confirmed the growing suspicion that the original crew had indeed scribed the roof pieces in the air, not on a leveled area of the ground as we were doing. It was becoming clear by the second week that we had not gathered enough information before dismantling, and to avoid mistakes it was decided to take the safer but more arduous route of scribing in place. Also, this would allow the crew to fix an annoying problem: the mysterious "dipping ridge" that crossed under the main ridge. (Why did they do this? Belvin had no answer for this question.) Since scribing was now to be done as we went up with the roof, we could lower the gable ends of the extensions to make their ridge piece level and adjust the rest of the roof members accordingly.

As the weekend approached, so did Hurricane Bertha. The rain moved in and we took a break to visit Tom and Harry Southworth's Garland Mill shop and water-powered sawmill. This Rube Goldberg-like assemblage of wheels, flapping belts and shafts awakened the kid in all of us. I particularly recall Ben Brungraber swinging from the trapeze that operated the conveyor bringing the logs in from the waterway outside. Most remarkable was the quiet: water falling through the turbine instead of the usual diesel roar or electric whine.

Water also continued to fall from the sky, and as we headed back to camp that Sunday thoughts began to center on the rising Peabody River. As dusk fell, a small crowd watched the raging torrent break up the beautiful bridge that had served us so well all week. Luckily most lines to the shore held; bridge parts would do no damage downstream and would be recovered days later, but no rebuilding would be done.

Rain lingered throughout much of the next week, but the roof of the pavilion took shape. A large black tarpaulin (100 x 60) was donated by the Gorham highway department, which had used it to cover their sand piles. This tarp completely covered the pavilion and made it look like a sculpture waiting to be unveiled (as suggested by numerous passers-by). In retrospect, it certainly would have made sense to erect a pole barn over the site, amortizing its cost by using it over similar projects in the future. As it was, it was too dark under the tarp to work; when the tarp was removed, the occasional shower mixed with chain oil made the timbers slick enough to cause dangerous conditions.

**R**ENDEZVOUS '96 also centers on camp and the many visitors who passed through during the project. The kitchen crew had befriended the campground firewood concessionaire, who progressed from supplying fresh strawberries to providing fresh road-killed deer. John Palmer immediately dove into his bag for whatever tool he uses for butchering and spent the day preparing venison steaks for a memorable dinner. Five foresters from the former Soviet republic of Kazakhstan visited in the middle of the week with their interpreter and U.S. Forest Service liaison. They were visiting forest districts throughout the U.S., observing management and sustained production. (Their own sizable forest system provides 38 percent of their exports.) They were impressed by our timber framing and the sense of community and family surrounding the camp, and by the recreational focus of current Forest Service policies. Life in the U.S. must seem like play to them; even with their new independence, it's still a struggle back home to get things done. They appeared committed to looking beyond the idea of their forests as something to be exploited. Before dinner, a half-dozen bottles of various vodkas appeared and toasts began. It seems in Kazakhstan each toast must be accompanied by a story, so dinner was a bit delayed that night.

Other visitors included Eastern Regional Forester Bob Jacobs from Milwaukee (head of all National Forests in the eastern U.S.) and White Mountain National Forest Supervisor Donna Hepp. It's to be hoped they'll view the Dolly Copp project as a model for similar endeavors.

An inspiring group of kids worked alongside us during the second week. The Trailmaster program stresses leadership training for kids 10 to 15 years old; younger kids are supervised by older ones who are well paid. Individuals work their way up through the ranks while doing public service projects such as trail maintenance, tree plantings and other activities reminiscent of the old C.C.C. Most kids voluntarily stay with the program for years, and it was refreshing to see their initiative and good humor as they helped drawknife logs all day long. Those who showed an interest in scribing or shaping a joint were given opportunities to do so.

As the roof frame neared completion, a few celebrations occurred in advance of the official dedication (which would not actually take place until the cedar shingles were on the roof weeks later). Joe Taylor, the maintenance chief at Dolly Copp, had been married in the pavilion years ago and had been the finder of the Prince Albert tobacco can behind the post. This week he celebrated his birthday with us in the pavilion. Chief Crazy Bear, a member of both the Forest Service and the Abenaki tribe, who related how important this site has traditionally been to his people, performed a smudging ceremony to bless the new timbers and presented Guild President Joel McCarty with a bear's tooth necklace. Native song and dance continued on into the night, with most of the camp kids in tow behind Crazy Bear, who was in full regalia. On Saturday afternoon, before the timber framers, Forest Service people, C.C.C. alumni and local residents went their separate ways, we all gave thanks for a job well and safely done.

Today the Dolly Copp Pavilion has a new triple coverage red cedar shingle roof on 2x6 strapping, with ample copper flashing in the valleys. New generations can look forward to another half-century or more of making memories in this beautiful building.

Some may question the Guild's involvement in a log-built project; there were no mortise and tenon joints or even pegs in the entire building. However, as an exercise in scribing, fitting and structure, it was an excellent venture. Making a post, plate and truss building stable without pegged joinery has lessons of its own. We could have easily done one or two workshops dealing with building morphology and decay, looking at how the building failed and how to repair with epoxy and other methods. These are strategies we'll have to keep in mind, because most of us who were involved believe we and the Forest Service want to do this again.

—WILL BEEMER



# Kitchen Notes from Dolly Copp

**W**E met Buster on the first day of camp. He came by while Debbie Goldberg was alone under the blue-tarp kitchen, beginning supper. Buster had two identically ratty GMC pickup trucks—one black, one red—with which he delivered firewood to campsites at Dolly Copp. Firewood, \$3.50 a bundle. But he wasn't selling firewood. In fact, Debbie wasn't sure what he said. "He's coming back in an hour," she said to me, "and you're going to have to translate." Woodstock, Georgia, meets Pinkham Notch, New Hampshire.

An hour later, on his second pass through the campground, Buster stopped and turned off his engine. What he had for us was a list in his head of about a dozen businesses he had solicited who would make donations for the timber framers restoring the Dolly Copp Pavilion. Ice, doughnuts, drinks, paper goods, groceries. To Buster, the pavilion was more than a building; it was a part of the people who live here. The possibility of losing it had been like losing someone in the family: painful, unacceptable.

Sixty years of community memories were held within those posts and under those rafters. Nita Williams realized that the loss of memories was the worst of the consequences of the Forest Service decision to close the Dolly Copp Pavilion. Picnics could be held in other places, but the removal of a community's gathering place was painful to the soul of the people who live here. Nita and her husband Pat had been transferred to the White Mountains from Oregon and soon learned that the people among whom she now lived held little fondness for the Forest Service for which they worked. The issues around the maintenance and closing of the pavilion were part of a pattern of poor communication. She decided that restoration—of building and of relationship—was the right thing to do. "This project is about giving people back their memories," she said.

Nita had tried to meet Buster. She knew he had started a maintenance fund for the building and that they both wanted the same thing, but mistrust dies hard. They met one afternoon when Buster was parked at our kitchen. Buster and Nita were two initiators of the project. A third was Joe Taylor, seasonal Forest Service employee. He had been married in the pavilion. When he first pointed out that repairs were critically needed, he was sickened by the response that perhaps the pavilion should be torn down. The change in direction toward restoration was a huge relief to him. Once we were there, he asked his superiors for time to watch what we were up to, so that the renovations might not deteriorate quite so rapidly (from ignorance) as the original building had. He asked slightly fewer than 1,000 questions.

Every day Buster stopped by the kitchen at least twice. His firewood runs happened in the late afternoon. We could hear him coming and stop cooking to visit for a few minutes. "What's for supper?" he'd ask. If we said "Rice," he'd just laugh and laugh. Buster came by one morning with so many strawberries and biscuits that our band of 50 had strawberry shortcake for dessert two nights in a row. Jude King hulled all of those strawberries while little Grace napped. One day Buster brought a gallon of his maple syrup so we could serve French toast as a surprise. And then one morning at 9 o'clock he stopped and said, "Got some meat in the back." In a shredded green tarp was wrapped the hindquarter of a deer that had met with a Bronco at daybreak. Buster is one of the people in town who is called by the sheriff when a deer or moose is hit, and he and his companion, Junior, thought we should share in the bounty. They also knew us well enough by now that they had stopped at the job site to collect John Palmer to come along and cut it up. Later they brought by Buster's industrial meat grinder so we could make hamburger from the tough parts. Don't waste anything.

Buster never would get out of his truck when he visited us. He couldn't, because he had only one leg; the other he had lost a few years back to diabetes. Buster always traveled with a companion, usually Junior, who would be the one to hand people their bundles of wood. Junior knew how to find spruce gum, which he gathered for our kids, and how to make a weather stick out of a spruce twig, which he made for Debbie.

Over and over again members of the community gave of their good will, generosity and appreciation. U.S. Forest Service employees worked alongside the timber framers when finished with their day jobs: Nita and Pat, Maryann Bradley, Joe Taylor. (Maryann was the one who made sure our accommodations at the campground worked. We were even provided with two refrigerators and the chains necessary to protect them from the bears.) George O'Hara, millwright, came early, stayed late and did everything from masonry to wood. Curtis was there. Curtis Milton made the Forest Service-Guild connection. Curtis was everywhere.

Folks brought us treats. Rachel Williams, daughter of Nita and Pat, made us juicy pies one day, cookies another; Pat brought us vegetables he grew. The deputy sheriff stopped her cruiser one rainy evening to deliver cookies she had made; she admired how we kept on going in the rain. Howard Murphy and Brian Lamarre came by one night with the next morning's breakfast: eggs, bacon, bread and orange juice for 50 people; they were looking forward to putting on the roof once we were finished. Susie brought gorgeous heads of lettuce from the garden she grows with Curtis (although Curtis, who was everywhere, had actually not been *there* much).

**A**FTER a few decades of observation, I've noticed that there are times when individual storylines suddenly weave together into an epic moment. No one person can plan the quality of that moment, for no one person can fully know all the beginnings. Timber framers and their families came to Pinkham Notch for many reasons: a chance to learn, a chance conversation, intrigue with history, the lure of the mountains, the lure of spending two weeks with some of the best people we know, the opportunity to take the only vacation some of us know—working with the Guild. But in the end, as we packed our soggy clothes, pulled up our tent stakes, wiped down our tools and hugged each other, we knew we had taken part in something bigger than we were. What if you were taught a line to sing and when it came time to sing it, you learned you were inside a Wagnerian opera? Or learned to play a piece on the violin and then when it came time to perform, learned you were playing Mozart's Symphony 26?

Building the bridge across the Peabody River was one part of our tale. The bridge builders worked hard and finished with sore and sunburned backs. The bridge was a work of art, strong, purposeful, beautiful. It had a life of five days, for the power of torrential rain is great, and when the storm that was once Hurricane Bertha roared through the White Mountains, not even Curtis's cables could save it. But we could not mourn for long. The bridge had been built to go away eventually. We did not choose the time of its going, we could not stop it, and there was more work to be done.

Connecting with the work of people who had gone before us was another part of our tale. None of us worked for the Civilian Conservation Corps—we're too young—but most of us had read those three words at least once in history books. At Dolly Copp we learned of the C.C.C. as a saving grace, a bold and innovative plan to give men work when there was none and to give the nation a treasury of public places. The work we did was not simply repair work. The work was a preservation of heritage; our efforts became one with the efforts of people who might have been our grandfa-





Will Beemer

*Buster comfortably surrounded by Michele Beemer (with strawberries, newly delivered), Susan Norlander (flower shirt) and Debbie Goldberg.*

thers. Our energy became joined with the energy of another time, a time before ours which now also becomes a time after ours. This was made clear by the presence of Belvin Barnes and others who had actually built the Dolly Copp Pavilion. It was made clear by the privilege of using trees that had been planted by Belvin and others at the time the pavilion was built.

Banish loneliness. The families of the Guild become connected. At Dolly Copp our children played, talked, hiked, swam together. Taylor Lukian and his friend Alex taught other kids how to fish, and then how to cook the trout they caught. All the kids joined in camp jobs (like "Bear Patrol," our nightly scrutiny of the kitchen site to make certain that not even a scrap of food was left under a table). Our children have a sense of community that goes far beyond their home towns. They have friends from distant places, and they share a connection they are probably too young to appreciate. But we older ones see this and cherish it. We discover that the joy of friendships and the power of joining helping hands and helping hearts expands in a way not explicable by formula.

We joined to eat. Cooking for 60 people is a developing Guild sideline, and one which Michele Beemer, Debbie Goldberg and I shared with happiness and resourcefulness. Michele built a dishwasher strainer out of branches and no-see-'um netting; she took more netting and invented the Dolly Copp centrifugal salad spinner, especially effective with a certain swinging of the hips. A meal of ravioli turned into Camp Dolly Copp Lasagna—a culinary fiasco transformed into a triumph, all while rains fell so hard on our blue-tarp kitchen that we couldn't converse from 18 in. apart without yelling. (This episode culminated in Rule No. 6: Always have bags of potato chips handy as hors d'oeuvres to allow you plenty of time to scratch your heads. It's followed by Rule No. 7: You will laugh when it's all over.)

The venison cookout was memorable. At other meals we savored the Middle East, Thailand, Mexico, China, Italy, the Berkshires and Georgia (Peanut Butter Pie; Buster and Junior loved it). We served Beef Stroganoff to the foresters of Kazakhstan. Serving good food to hard workers is a unique pleasure. Separate efforts become

one effort. Each sustains the other.

Certain outings were memorable. Some folks clambered up The Imp. One band, led by Tom Southworth, hiked into the magical lakes of Carter Notch—Tom and the kids way ahead. But the breathcatcher of all breathcatchers was Garland Mill, Harry and Tom Southworth's place, which we visited one rainy afternoon. Have you ever stepped into a legend? In this building built and added on to over 140 years, water powers tools now as then. A huge box of rocks serves as a counterweight. Belts have been mended, blades have been sharpened, sluices have been watched over and in all this time still the logs are floated in from the pond and ripped into boards by a few indefatigable and upright men. We had tears in our eyes.

The work on Dolly Copp continued. We carried on through torrents and gales. Bertha was big, but it was followed by worse. After a couple of days of clearing weather, the wind and rain resumed. Two days of unflinching howling surrounded us on our final days, and rain fell in waves. During this time, a new record was set on Mt. Washington for summer wind speed: 157 mph.

**W**HAT is courage? Jill Ellison with her three little boys, changing them into one more set of dry clothes, and till smiling. Zeke Diezel and Rowan Norlander-McCarty making up games with yarn dolls and Spiderman while the rain roared. Danny and Lynn Deschambault taking turns bouncing babies and scribing wet timbers. Micah and Asa Goldberg, Birch Norlander-McCarty and Michelle and Will's "daughter for two weeks" Joyce entertaining themselves and not complaining about the storm. The Buzerak family, whose tent was blown away in the night, but who still came back to work. And all the timber framers and foresters and volunteers who continued to put that pavilion together, committed to finishing, committed to each other, committed to doing good work. After those final two days, our ears ached from the unrelenting roar and our skin hurt, but we did it—we put that building back together. We have helped to restore memories. We have also created our own.

—SUSAN NORLANDER

# The Voyages of Brungraber: Summer



Photos Ben Brungraber

*Worker surfacing timbers for the temple gate at Nara. The gate measures about 50 by 100 ft., 60 ft. high. Edge tool resembles a sharp spoon.*

SUNDAY 23 JUN 96-Monday 24 JUN 96. Travel all day. I leave home at 4 AM Sunday in order to arrive at 4 PM Monday. The Great Circle is fairly serious: an hour out of Portland, Oregon, and you're still over land. The Alaskan fjords are glorious, even though they show many tracks of clear-cuts. The movies are in Japanese on Channel 1. Ninety-eight percent of the passengers are Japanese. This may mean that they come to see America 49 times as often as we go to see Japan. The Tokyo airport is a two-and-a-half-hour bus ride from downtown. The fare is \$29 and two women come out to bow the busload of us on our way. There are curtains, chintz and chandeliers on the bus. The driver has a cellular phone and a computer screen in the cockpit. The highway tolls are \$6 and up. We pass three of them on the way to the city. We also pass the indoor ski slope. This thing has artificial snow and the HVAC system to maintain it. It is shaped and supported just as you would imagine it—on stilts. For golf, there are huge, netted driving ranges all over town (and the country). The highway lanes are tighter and nobody slows down at all. I saw alleys, rice paddies, tall apartment buildings, ancient shrines and stores sharing a single block. Not a lot of zoning in evidence.

I arrive at The New Otani hotel just in time to catch the end of our speakers meeting. Meet the rest of the circus. An English architect, a Japanese engineer, two Japanese wood salesmen and the American Plywood Association representative. Walk in hotel garden, in the rain, with Jeffrey Emms, the British architect. Joined him for a pair of \$8 beers (a deal, in retrospect). The hotel room

includes a flashlight, tea maker, oddly linked light switches, entire-bathroom drains, kimonos and slippers and a fine mini-bar.

25 JUN. Tokyo, New Otani Hotel. There are 220 attending. I see Miyasaka-san in line and confuse us both by approaching him hurriedly. Miyasaka is a fine Tokyo architect who specializes in timber buildings, joined by traditional methods. He has visited us thrice and attended the TFGNA Rindge conference (1993) with a temple carpenter. He is pursuing a cross-cultural project between the Guild and Japanese framers. He sits right behind me in the room and confirms that we have a dinner date.

Jeff's talk is interesting. His firm, Potton, has a simple system of posts, girders and purlins. The lighter framing is concealed and dimensional. Three men erect the entire shell in 7-10 days. The beams are Douglas fir they season for 14 months before cutting. The walls are prefabricated in panels but are not foam-core. The windows are framed in the panels but the glazing is removed. This spares damage and makes the panels light enough to manhandle. They do not use cranes.

The Japanese seem to be terrible speakers. They ramble on for 20 minutes over the same line of Japanese characters in an overhead projection. They can spend four sentences apologizing for their inadequacies in covering the assigned topic. Brutal to sit through three of them.

I have dinner with Miyasaka-san at a sushi place his family visits for every birthday. The other guests are friends of his, including



Kawai, a sensei engineer. This young researcher is an honored doctor, doing research in the strength of traditional building methods. He has an hour train ride and a 45-minute drive to get back to his home. We exchange presents (luckily, I have come prepared for this custom) and engineering articles. I find out that I am not quite the omnivore I had always claimed to be. Although I eat everything, I am not taking thirds on that raw cuttlefish. We travel, by subway, through Sumijiro, the busiest train station in the world. We are packed so tightly that several people could have picked my pockets with my full knowledge without my being able to do anything about it but smile. I pass out in my room, prey to Sapporo and the date line.

26 JUN. Today we will travel to Osaka. I get out and take a quick walk around Tokyo in the continuing rain. I borrow a hotel "brelly" (Jeffrey's term) and stroll in their park. Take a few photos of the carp and remarkably pretty garden. Just time for a quick trot around the neighborhood before we leave for the train station. The bullet train goes on time. The \$190 fare covers a two-hour ride. The seats are spectacularly comfortable and spacious. If this were available on the Eastern Seaboard, the Delta Shuttle would be out of business. We are never out of sight of the coast, nor of human development. The terrain is also decidedly rugged. The train goes through a slug of tunnels. We pass tea plantations, with carefully pruned and trained rows of tea plants. The hills are covered with buildings as though the land were flat. Mount Fuji is socked in with fog or it would show gloriously on this trip. I sit with Charlie Barnes, the APA guy in Japan. He married a woman with Chinese roots. Their seven-year-old daughter reads, writes and speaks English, Japanese and Chinese. She speaks Chinese with her mother, English with her father, and the three of them speak Japanese together.

That afternoon in Osaka, the whole group went on a boat ride on the serpentine rivers of the city. Osaka is the second largest city in Japan and shares a huge harbor with Kobe, site of the recent major quake. Our boat has a glass roof that lowers disquietingly quietly to allow passage under the low bridges. The claustrophobia sneaks right up on you, without your immediately discerning the cause. After the ride, we all stroll up to the Osaka Castle, the dominant feature of the skyline. This mountain citadel has tiers of fabulous walls and moats, pierced and crossed by huge gates and stunning bridges. One gate has spliced posts that must be 18 in. square. The castle itself is undergoing a major rehabilitation and is completely buried under what must be millions of dollars in scaffolding. In the square, we dined on some funky octopus dumplings, etc., and watched as thousands of people passed us on the way to what turned out to be a basketball game.

That night we walked about the incredibly bustling city. Yami, Jeff, Charlie, Dennis and I had *shabu-shabu*. You cook this discrete beef stew at the table, in a pot of boiling water. The beef is sliced so very thinly while it is frozen. The vegetables and noodles bulk the entire thing up into a huge and tasty mess. They are filming a movie on the bridge outside our window. We walk about town after supper.

Walk into a *puchinko* parlor—the single strangest thing I witness in Japan. This gambling game combines the most boring, outdated pinball game you ever saw with computer graphics that make the typical net conversational screen look lively, and submerges the entire room in the most astounding din. I do not imagine how anyone stays in the place for an hour, let alone gets as mesmerized as the zombies I saw. Very strange behavior. The video game parlors are breathtaking: sport fishing, linked superbike races and shaking rally car races are just a few of the thrills to be had.

This hotel room is even odder. The room key sits on a ledge next to the door and activates the lights. The tub stands free of the walls and allows water to drain down and out to a floor drain—no

caulking anywhere. There is a lot of English TV, and a Doris Day/Rock Hudson flick dubbed into Japanese. This is really boring to watch. The violence on the domestic shows is real but disarmingly mingled with slapstick humor.

The Japanese are refreshingly open about World War II. They orient you by mentioning Hiroshima, then ask whether you have heard of it. They describe sections of cities in terms of their relative destruction by American bombers. The Rape of Nanking did not come up (but I was only there for a few days). In four days, I must have seen a million Japanese. Four of them were as much as 20 pounds overweight. The rest of the world's people must be aghast when they visit America—we are so fat.

27 JUN. Talking in Osaka. There are 90 people here, in a very hot room. Both Jeff and I are faster than billed and are forced to shuck and jive for a few questions and monologues. One tall and regal white-maned architect asks me why we are here, what we are trying to sell and about the "software of building." His demeanor tempts me to think that he is getting at the *spirituality* of building; but the translator did say "software," so I am left to answer both sides of the issue in the same response, a delicate dance.

I eat lunch at a table of 12. At first it seems that I am the only English speaker, but then Daimo takes pity on me. He says either that I have impressed or disappointed the others with my dexterity with chopsticks. Once a translator has revealed himself, we embark on a labored discussion. It appears that nobody has gotten much out of all my efforts to explain construction costs in the U.S. We clear up some loose ends and a sloppy middle before reconvening in the hot room. They are not even going to try to translate the Japanese speakers for us this time. This allows me to read some magazines and catch a nap. It seems easier to follow the Japanese without the translation.

That night all the speakers go out on the town of Osaka. We wander around the alleys and avenues. We stop at a Shinto shrine and offer up some good-natured absurdities. I pass on these. We end up in a private room on the second floor of a sumo restaurant. The tie-in with the heavy wrestlers is ill-defined. Looks like sushi appetizers and *shabu-shabu* all over again. Wash it down with a lot of Sapporo, sake and some plum wine. We sit on the floor, amidst American whining. I toast how much the Pacific seems to have shrunk tonight. We run up a \$1100 tab for nine and think ourselves well treated.

As dinner is closing out, George Kobayashi, at the other end, is making some calls on his cellular. We hit the sidewalk with some idle thoughts of walking about and ending up on the video race track to settle some scores from the night before. Two attractive women show up and are introduced. Consternation and confusion—are these pros, enlisted to help entertain the visitors? One of whom is four months pregnant? Much eye-rolling and muttering. When it finally becomes semi-clear that they are karaoke hostesses and that we are bound for their stronghold, the crowd is hardly appeased. But no one is sufficiently miffed to start an international incident with relative strangers. So we press on, however unenthusiastically. Up a small elevator to the third floor of an apartment building. Signs in the hall seem to indicate that this is just one of a half-dozen similar joints on the same hall. Into the bar. We are the show. This place is small, the size of our design office. Room for two tables and three stools at the bar.

The hostesses start lighting cigars and pouring drinks. It takes us about seven seconds to get into it. The Englishman insists on a solo version of "Sweet Caroline." His wife, rightfully, hates the song; he, inexplicably, loves it and somehow transmits that passion. I mistakenly think I can get through Willie Nelson's version of Hoagy Carmichael's "Stardust Memories." The hostesses light up at my request, but are bitterly disappointed by my mumbled and startled rendition of the seemingly endless dirge. When our preg-



have cost three more, but that still leaves \$30 million for the timber frame. It shows. The most beautiful posts in the world: 30-in.-diameter, virtually clear Japanese cypress, carefully hewn and shaved into pure cylinders of art. Two levels of roofs, consisting of the most ornate joinery I have ever seen. The curved eave trim boards are pegged at the corners with through tenons and keys on thongs, for crying out loud. They rediscovered the use of a plane that looks like a sharp spoon on a long stick. The user of this tool shaves elegant texture into the exposed (barely) surfaces all over the building. The gate must be 50 ft. by 100 ft. by 60 ft. tall.

We got there just at 10 o'clock break, so I did not get to see a lot of work going on. The crew is, apparently, not earning a lot of that 30 million. When I tried to explain why a person might be willing to do such work for so little to my co-visitors (professional plywood lobbyists and conference organizers), I had goose flesh and near-tears before I had made any dent in their comprehension. This was the most memorable end to a too-brief trip. The only reason to settle for four short days in Japan is that you are panic-stricken (as I was) at the prospect of not getting there at all.

Onto a plane in Osaka, to Tokyo and on to Portland. Aggravations with money changing and luggage, but the films are good and the food is fine. Back in the States, and in a daze. They say it takes as many days to get reacclimated as the number of time zones you cross. That explains the 11-day haze.

—BEN BRUNGRABER

nant companion embarks on an overly ambitious Joni Mitchell medley, the hostess chirps in helpfully, amazingly tunefully and totally phonetically. They, apparently, know every song of the dictionary. Toward the end, we see God Save the Queen coming, only to find that it is the Sex Pistols' version. This is a hysterical surprise and is only heightened by Jeffrey's monotone narration of how unfunny he considers all this. I am rolling, literally, on the floor. Then the real version, followed by the Star-Spangled Banner. I come out of the (tiny, need I say) bathroom, to hear Jeffrey in the middle of an a cappella version of the Welsh national anthem. This one is not in the file nor in the hostesses' repertoire. We are all awed by the tune and the performance. Brings down the house. We say our good-byes in the street and repair to our hotel amidst much feeling of harmony and good will. These Japanese really do understand human nature, if not our jokes. Karaoke at the local Best Western is now out of the question, though.

28 JUN 96. We are fortunate enough to have an arranged visit to the temple gate being rebuilt at Nara. Nara was the capital before Kyoto, which means it is wicked old. The Japanese are rebuilding some of the vast complex of temples, their surrounding walls and the gates through those walls that once covered square miles in Nara. The gate is taking two years and \$37 million to build. The fabulous tile roof must cost four million, and the steel building temporarily housing the project must





# Bethlehem Conference

**A**FTER the September Guild conference in Bethlehem, Pennsylvania, the pattern now seems established of equal-sized annual Eastern and Western conferences, with about 200 in attendance. But if the days of 500-person-plus conferences are over, there has been no diminution in the range or aspirations of the presentations. Among many other things, the curious visitor to Bethlehem saw images of monumental renaissance timber work in Belgium, heard three engineers set out the principles of joint design, learned to wear a name badge on the *left* side so the *right*-handed prospect shaking hands can see it directly.

The day-long timber frame workshop that preceded the conference introduced a dozen neophytes to the trade and brought forward another dozen who came because they "always learn something." The workshop also distributed the new Guild workbook, a photocopied compilation of articles mostly from this journal and *Joiners' Quarterly* (the latter articles models of clarity), but also with early items from *Fine Homebuilding* and the very latest engineering thinking in the form of a paper from November's International Wood Engineering Conference in New Orleans. Some of this book is difficult to read, but all of it is interesting.

The Timber Frame Business Council, launched as a vessel of the Guild at the '95 Williamsburg conference and chartered on its own at a meeting this year in Annapolis, reported its progress in what amounts to setting up. In his essay for the conference booklet and again in his personal presentation at the Council seminar, treasurer Jonathan Orpin's humanistic and optimistic view of the purposes of the Council showed the stamp of the Guild. The substantial work of the Council, which began with the writing of a code of conduct for its members, is at an early stage: in marketing timber framing to the public, in developing a statistical profile of the industry and in discovering engineering data that might lead to national technical standards for modern American timber framing. The statistical profile will be drawn from a six-page form, now in circulation, that is probably over-detailed for most shops but will produce interesting results if respondents have the patience to get through it. The engineering data, meanwhile, is in the hands of Dick Schmidt at the University of Wyoming, who has declared himself interested in working out arrangements of all-wood joinery acceptable to modern codes (see *TF* 41). The results of this research are potentially helpful, if also potentially burdensome, the proportion between the two depending not a little on the assumptions of those using the data. As for marketing, the Business Council has underwritten one group ad in a national magazine, apparently seeking a niche outside the bright steady light of *Timber Frame Homes* and even a new entrant to the field, *Timber Homes Illustrated*.

Although Bethlehem is a town not without history, noted for the 18th- and 19th-century buildings of Moravian College and the magnificent Central Church downtown, and differently noted for the vast red-brown domains of the Bethlehem Steel Co. (now being demolished) at its edge, Guild members at the conference were immured, save for one short afternoon's tour of the downtown, in the doubtful confines of a Holiday Inn next to Interstate 78. To the conference directors, the arrangement offered significant administrative advantages over the college campuses that have typically hosted us in the East, and to all of us it offered much more comfortable accommodation. But surroundings do matter. For people who work with large pieces of wood and think a lot about building design, three days enfolded by incomprehensible artifice is a very long time. Western conferences have usually found venues that are at once respectable and comfortable and should inspire Easterners to do the same.



Ken Rower

*Chris and Diane Feddersohn at the moment of triumph during the Guild auction, after Chris outbid Stewart Elliot in the longest and perhaps most expensive one-on-one contest in auction memory. The Feddersohns won a government surplus hickory mallet for \$600.*

Instead of a business meeting or an open forum, the closing ceremonies at Bethlehem provided opportunities for direct public exchange between members and directors. Guild president Joel McCarty, whose tenure now enters its third year, and whose swift wit no longer obscures a sustained dedication to the welfare of the organization, asked for constructive criticism of the conference and the Guild, especially from newcomers, and heard what must be called a wholly friendly response, not omitting suggestions for improvements. It has not always been so. The Guild in the second year of its second decade continues to evolve, not by increasing its dimensions but by taking new shape to fit new questions, or better shape to fit old ones.

—KEN ROWER

**C**OMMENTARY. A recent story in the New York press reports the head of that city's carpenters union has been indicted on charges of illegally receiving kickbacks on union jobs and channeling dues into his own account, activities that may come as no surprise to anyone familiar with the annals of organized labor. Not that there aren't plenty of other organizations that can boast of long traditions of corruption; it's just that the word *union* evokes a particularly rich tradition.

As tarnished as the word *union* has become, the word *guild* has acquired a mellow and refined patina in modern parlance. Where the one evokes images of backslapping politicians vying for PAC contributions, and labor versus management, the other evokes an age in which tradition and craft were treasures to be passed from generation to generation. It seems that the principal purpose of a union is, through collective strength, to secure as many benefits for its members as possible. A guild on the other hand seems most concerned with preserving and even enhancing a body of knowledge. A guild's concern with the welfare of its members would be expressed through the promotion of its craft. As the craft thrives so will its practitioners. Or so the thinking goes. While unions and guilds may in reality be a great deal more alike than I am allowing, this was the idea I took to my first Timber Framers Guild conference this past September.

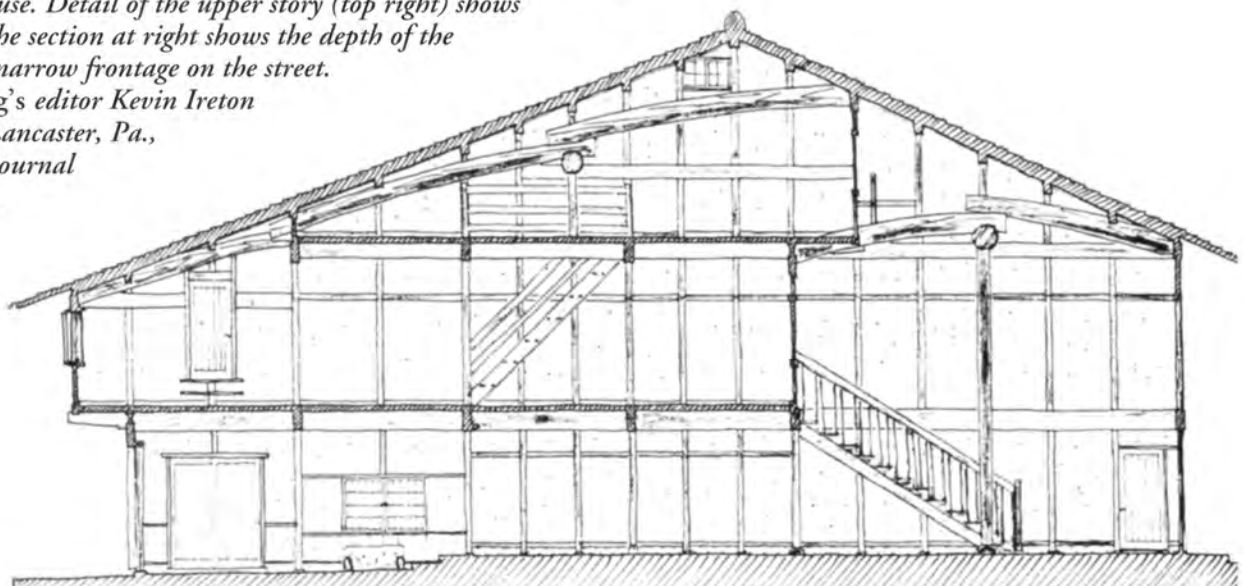
What I found at the conference is perhaps as much a function of what I brought with me as anything else. Leading up to the Bethlehem conference, I'd spent four years *Continued on page 16*

# Design Contest '96



Photos Michael Anderson

**T**HE Design Contest at Bethlehem attracted too few entries and gave the three judges difficulties because of a lack of context. Nevertheless, Michael Anderson's *Susameisha*, described as "a mostly recycled exhibition space in Kyoto, Japan," persuaded them of its refinement and organization, and earned the Osaka architect a Design Award in the nonresidential category. Major structural members were salvaged from a wooden schoolhouse demolished in the 1980s and shown above right. The appearance of diagonal braces in a Japanese frame (above) gave pause. Detail of the upper story (top right) shows traditional timber work, and the section at right shows the depth of the city building, which has a very narrow frontage on the street. Judges were Fine Homebuilding's editor Kevin Ireton and Don A. Dale, architect of Lancaster, Pa., together with the editor of this journal and designer Chuck Dougherty, who administered the contest.







Garland Mills



Dennis Buttner

Three honorable mentions, of which details appear here, were also awarded in this year's competition. Above, Harry Southworth of Garland Mill Timberframes seated in front of the little (680 sq. ft.) Lost Nation cabin in Lancaster, N.H., "whose simplicity made it charming," according to the judges, and earned honorable mention in the small residential category for designer Tom Southworth. Above right, a tiny part of the huge building (14,800 sq. ft.) that earned honorable mention in the large residential category. Designed by Dennis Buttner of Timbertecture (Lith, Illinois), this house earned praise for its logical floor plan and vast ambitions but dismayed the judges with its jarring elements and air of conspicuous consumption. At right, timber-framed dog house, designed by Jim Collins, AIA, and winner of an honorable mention in the nonresidential category (arguable). Built of recycled barn timbers by Artisans Creswell and Powell of Toughkenamon, Pa., and with a gross floor area of 21 sq. ft. at a cost of \$304 per sq. ft., this pleasing folly shared the People's Choice award with the Lost Nation cabin.



Lionel Powell

## ABOUT RECYCLED TIMBERS

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*Continued from page 13*

with a small remodeling company in Princeton, New Jersey, doing a range of carpentry with an emphasis on kitchens and baths. For the last two of those years, I was running the jobs, responsible for scheduling subs and suppliers, massaging architects, code officials and homeowners, doing or overseeing the carpentry work and all the while trying to bring the job in on budget and on time. As anyone who has been in that position knows, it doesn't take much to transform the carefully choreographed ballet of the original schedule into something more closely resembling a mosh pit at the local grunge scene.

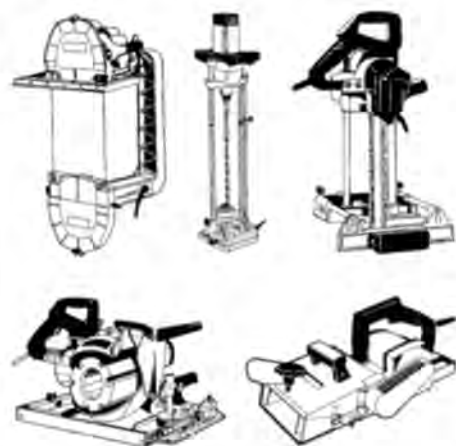
In sharp contrast, there is the particular pleasure, encountered at my first timber framing workshop, of paring a tie beam tenon to the line with the keen edge of a framing chisel. After joining the Guild, attending another workshop and cutting two small frames of my own, I arrived in Bethlehem ready to trade running kitchen and bath jobs in someone else's company for timber framing in my own company. I arrived, also, curious about the state of the industry and with a long list of questions, from foundation connections to marketing, on how to become a successful timber framer.

If there was one quality that characterized the answers to those questions, it was the generosity with which they came. The people I talked to seemed genuinely enthusiastic about sharing their experience with a newcomer. That such a body of knowledge as timber framing is not, in the minds of those who are among its finest practitioners, proprietary, was encouraging and a strong indication that my understanding of the word *guild* was shared by others at the conference. Members clearly view themselves as resources, and to the extent that there was attentive listening, view each other as resources as well.

Complementing that enthusiasm and generosity, though, was a good measure of perspective and debate that kept the conference (and keeps the Guild) from becoming a mutual admiration society. Much has been said lately in various Guild forums about the direction of the Guild and the needs of its members, with particular concern as to how to reconcile craft with business. Where some see schism, even schizophrenia, I prefer to see creative tension. Why should any of us have to apologize for creating a successful business? Why not instead encourage our businesses to flourish as Paul Hawken (who has been cited in these pages before) has said, "as faithful, uncluttered expressions of self"? We are, all of us, in need of both inspiration and income. That's just the way it is. I can imagine that some feel that the spirit of the first days of the

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Guild has been diluted with unseemly matters of commerce, but to me the tenor of the conference, both in its formal presentations and its informal discussions, struck a nice balance between the craft and business of timber framing.

In assessing the "state of the industry," I was also pleased to hear the presence of disparate voices representing a variety of timber framing styles and ambitions. The conference and the Guild appeared comfortable assimilating everything from stark, Zen-like structures to over-the-top-and-back-again behemoths, and, on the whole, that seems like a good thing. In part, I suspect, the Guild can withstand being pulled in different directions both philosophically and architecturally because there is no shortage of excellence within the organization. Though you may not care for every frame that's been cut, it's hard to dispute that the overall level of quality is astronomically high. At some point, as membership in the Guild grows (and perhaps this is already happening), that level of quality may drop. The organization will then be faced with some tough decisions. For now, though, it appears to me that the Guild is alive and well in large part because of the debates and differences within its membership. Couldn't that change if quality drops?

The issue of standards brings me back to my understanding of the word *guild* that I brought with me to Bethlehem, for surely it is part of the role of a guild to uphold standards as a way of protecting its members and its future. Currently the only standard for membership is a checking account that can cover the annual dues. To be sure, the members I met at the conference wildly exceeded this minimum standard. There may come a time when the Guild has to impose stricter standards, and that is not something I heard much about.

On the whole, the conference proved inspirational. I met owners whose timber framing companies will serve as models of excellence for my own new venture. They greeted me with humor, humility and generosity. I came with impressions, questions and a sense of what I thought I could do. I left with answers, some more questions and a profound sense of what can be done.

How a group chooses to organize itself says a great deal about how it sees itself. The form it takes will have certain connotations that will influence how it is viewed by its members and the public alike. Through its continuing efforts at promoting both the craft and business of timber framing, the Guild indeed seems entitled to the moniker *guild*. Its particular challenge may come if and when it has to play a more active role in upholding standards.

—TOM PINNEO  
*Tom Pinneo directs Princeton Timber Frames in Princeton, New Jersey.*



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## GUILD NOTES AND COMMENT

**I**N the fall of 1993, I received a letter from Nancy Wilkins asking me to assume a role of "forest guardian" for the Timber Framers Guild of North America.

I had first met Nancy at the Guelph Conference '92. She was in the dorm room across from ours, and we chatted in the ladies' room. As we prepped, we talked of families, seminars and eventually forest matters—a subject of profound interest to me. Nancy had studied forestry. As a Guild board member, she had taken up the question of the health of our continent's forests. Various other members had begun this movement at least four or five years earlier. By contrast, I was a trained musician, teacher and researcher with no more information about forestry than the impressions I had gleaned from a lifetime of looking at trees.

At the business meeting, I listened to the proposal that suggested Guild members should devise a method of self-taxation to insure some form of involvement in forest management. I was amazed that a group of builders would dare to use the word *taxation* at a time when the real estate and building industries had hit a modern low. What's more, the group hardly raised a voice of dissent.

I went back to New Hampshire and contacted the Society for the Protection of New Hampshire Forests (SPNHF). As a self-appointed volunteer, I talked with Paul Bofinger, the Society's president, and its vice-president, Paul Doscher, explaining what I had learned and heard. They made time for me and listened with a patience that was as astonishing as the initial inspiration. They asked questions I couldn't answer, but from that moment, I began a new chapter in my life that led into ever-widening circles of involvement with forest issues.

The following year at Rindge, I attended the seminars on forest matters and became the chairperson of a "TFGNA Forestry Working Group." Other members of the group joined voluntarily. Our job was to assess the feelings of the membership about forest issues and recommend some appropriate action to the board.

I undertook this job in the fall of 1993. A great deal of the work was done by phone, fax and letter. The culmination point came in February 1994 when a small group worked out a position statement and created a questionnaire that was sent to Guild members before the conference in

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Nacogdoches, Texas. We intended that the results of the questionnaires would become a launching point for discussion at the conference.

During this period, I signed up to take the conservation and ecology courses offered by the SPNHF. Finally, I took steps to better understand the issue in which I had such interest. That entire fall, I looked at trees trying to identify them rather than just marvel at their beauty. Briefly, I thought that my new knowledge might spoil my emotional pleasure, but I was wrong. I had stumbled onto a field of study so broad that it would outlast any lifetime, and one so particular that it carried me down into the smallest atom of my living awareness.

At the precise moment of the Texas conference, our family sustained a major tragedy that consumed a great deal of my attention and energy. I did not forget the Guild but felt I had fulfilled Nancy's original request. Results from the conference suggested that the Guild was too far-flung to support a single forest project. Building supplies may travel back and forth across the continent with ease, but forests vary greatly from one location to another. Direct involvement in forest management or property ownership seemed an untenable choice for the Guild. The words of Len Brackett stuck in my brain. His advice was to get involved locally.

I took him seriously. In June 1994, I was appointed as a Tree Steward in a program sponsored by the SPNHF, the State of New Hampshire Division of Forests and Lands and the University of New Hampshire Cooperative Extension. In this context, I have worked with local school groups to assist in maintaining various trails and private or public park lands. I have been part of a group to inventory the trees in the city of Manchester, part of another group to clean up parks and school grounds, and yet another to foster the Back Yard Tree Farming Program that aims at teaching every homeowner of fewer than 10 acres to care for their soil, water, flora and fauna. I received training in political activism and became a volunteer lobbyist both on the state and federal level.

One can say these things easily, but to really know what you are doing is an endless preoccupation. Every day, I find myself on my hands and knees looking into the face of an insect about which I know nothing or pulling up a weed that I find distasteful only to learn that elsewhere it would be eaten.

In January this year, Ed Levin called me and asked if I would represent the Guild at the annual meeting of the New England Society of American Foresters. I was to be on a panel entitled "How Others See Us: Perspectives on Forestry As Seen by Non-

Foresters." Fortunately, I had studied with various foresters, tramped some woodlands with them, discussed issues and formed an idea of their profession. The foresters I know value their work and would not exchange it for any other. Like timber framing, it is not a highly lucrative profession, but it is healthy, positive, life-giving and paced to the natural rhythm of growth rather than the man-made tempo driving much of our lives.

Recently, I decided it was high time to explain myself to the members of the Guild. I read through the back issues of the journal and *Scantlings* looking for forest-related articles since 1993. To my great surprise, I was identified in the journal as "Forest Resource" person. Equally surprising was the absence of much recent comment on forestry. Back in 1993-'94, I learned something about Guild members' thoughts on forestry subjects. What do they want from their Forest Resource person in the winter of 1996?

—NANCY JANSSEN CURRIER

### Department of Clarification

A communication received from Ross Grier of The Cascade Joinery, Everson, Washington, reports: "We noticed an error in credits for technology development in the Thorburn Residence article ('Round Post, Square Beam Joinery,' *TF*41). 'Joe Schmidt' on page 8 should read 'Sam Harper.' Sam invented the second generation jigs. We are on to a third generation developed by The Fabulous Spence Babe for the current job in Hawaii. Fabulous admits it's no good and we'll find someone to develop the fourth generation on the next twisted timber job." Below, Sam with his Generation 2 jigs.



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