



## Log-Home Homage

**American Log Homes**, by Arthur Thiede and Cindy Teipner. Rodale Press, Emmaus, Penn. 1986. 192 pages. \$24.95 hardcover.

by Paul Hanke

I recently worked on a design for an Adirondack home that will be reminiscent of the rustic camps that gave that area much of its character. So I was definitely interested when *American Log Homes* arrived for review.

Arthur Thiede and Cindy Teipner toured the U.S. seeking both old and new examples of log building. What they found ranged from a U.S. Park Service replica of Abraham Lincoln's humble boyhood home in Indiana to the opulent "Empire Mansion" in Denver, Colorado. The book includes examples from many states—from Montana to Virginia to Idaho and Nevada and, of course, the Adirondack region of New York.

According to the authors, log construction was introduced to North America by Scandinavians in Delaware in about 1638. While this overlooks the earliest log-framed earth lodges and longhouses of Native Americans, it does dispel the apparent misconception that the earliest settlers built log shelters as their first homes.

The authors describe the development of log construction, including stockade, round, hewn, and stack-log methods, and they note that log building is now "a billion dollar" industry in the U.S. Following this short introduction, the remainder of the book is devoted to a photographic survey of log dwellings—organized into historic, contemporary, and adaptive-restoration categories.

By far the nicest specimens—to my eye—are in the historic section. Here we find sinuously curved and burlled logs used for braces, railings, and balusters; a delightful, elliptical-headed window, shaped to fit around adjacent logs and stones; hexagonal bays; bell-shaped roofs; and many other fine examples of the grace and style of old log buildings. In fact, details were the most interesting thing to me: for example, the exquisite turquoise and purple window sash with butterfly-motif shutters at "The Timbers" in Long Lake, Michigan.

The adaptive-restoration section also includes fine examples of the log style. Foremost among these are the Robertson Homestead in Tennessee and the Culloden Farm in

Kentucky—two gems restored to museum quality. Here, too, are pictures of a beautiful rail detail, and "Mulberry Farm," with contrasting log and stone sections and a nicely integrated modern sunroom.

Unfortunately, most of the ventures into modern design were not as successful, and for the most part I was disappointed in the contemporary section that concludes the book. For example, the massive, black metal truss plates of "Panther Place" stand in stark contrast to the hammer trusses of the "Standing Bear Lodge," which seem more at home on a log dwelling, even a contemporary one.

On the other hand, "Northwood" is one of the nicer contemporary examples, due in part to the use of vertical logs between large, fixed windows. And Standing Bear Lodge is reminiscent of its finer predecessors, although a bit heavy on the "skip peeled" logs (strips of bark are left on, creating a zebra effect).

My discontent with the modern examples is not a criticism of the book itself. But my overall impression was that the dwellings chosen by the authors seem to lack something their predecessors had. They are too stripped down, lacking the richness and detail I associate with log building, and I began to wonder if logs were appropriate for modern design.

Some final comments on *American Log Homes*: contrary to the authors' opinion, poplar is not a decay-resistant species, and locating selected floor plans at the end of the book was a real nuisance. And why in heaven's name didn't the authors tell us the solution to the fascinating problem of fitting a foundation under three previously dismantled log buildings that were rejoined into one, when no measured drawings of the originals had been made. This last question reflects a broader lack of concern with the nuts and bolts of log construction, which is addressed only through a few detail photos.

Overall, though, the book provides a pretty nice glimpse of some noteworthy log homes—and it never was intended to be a how-to book. Get it for a look at what is possible in custom log building. ■

modern period. The next six chapters introduce modern masonry materials and construction methods: bricks, glass block, structural clay tiles, concrete block and pavers, stone, plus mortar and grout, and accessories such as ties and wire ladders. Here you'll find a wealth of information on physical properties and characteristics, ASTM standards, unit types and dimensions, core designs, tolerances, and more.

For the designers among us, there are glimpses of custom blocks, textured and split-rib blocks, and sculptured brick. You'll even learn the difference between "rugs" and "barks" in the lexicon of brick faces. Notably absent is any consideration of ceramic tile or interlocking mortarless block.

Of particular interest is the section on environmental characteristics, which tackles fire resistance, thermal properties, passive-solar applications, acoustics, and differential movement. (Here I learned that after the London fire of 1666, King Charles II decreed that the walls of all new buildings be of masonry construction.)

In a more modern vein, Beall provides fire-resistance ratings (one to four hours) for a variety of wall sections. She also includes an introduction to single-wythe, multiple-wythe, hollow-core, and cavity wall construction, in which I learned that the 16-story "Monadnock Building" was built with brick bearing walls 12 inches thick at the top and an awesome six feet thick at the bottom.

The author's discussion of the thermal properties of masonry focuses not on its minimal insulating values, but on masonry's "thermal lag" and its effect on cooling loads and heat-loss calculations. She includes a chart showing how to apply the so-called M-factor to steady-state heat-loss calculations for masonry construction, which modifies the final value to more accurately reflect the effect of thermal mass on heat load.

From here, Beall turns to solar heating which, aside from a few rule-of-thumb guidelines, is inadequate for design purposes. (She does refer readers to the Los Alamos *Passive Solar Design Handbook* and Ed Mazria's excellent reference, which is fair enough.) Also, her treatment of insulation methods and materials is far too general for such an important issue. Ditto her treatment of vapor barriers, although the need for both is repeatedly noted.

Next we have six solid chapters on structural design and detailing—each with a wealth of technical data, charts, design guidelines, engineering methods, typical details, formulas for load-bearing and non-load-bearing walls, garden screens, dry-laid stone, fireplaces, and even pools. Beall also includes seismic design, beams, lintels and arches, retaining walls, moisture protection, cold-weather construction, and masonry restoration. The illustrations are excellent throughout the book, and the design sections include several worked examples.

The book closes with an overview of the economics of masonry construction (consisting mainly of pages of charts from the Brick Institute of America that support the idea that brick is less expensive than steel or concrete construction), a chapter on spec writing and

inspection, glossaries of terms and symbols, ASTM standards, masonry organizations, and a bibliography. It's a virtual bible for "masonophiles" (although you can get the real Bible cheaper). ■

## Brick-and-Block Bible

**Masonry Design and Detailing for Architects, Engineers and Builders**, by Christine Beall. AIA. Prentice-Hall, Englewood Cliffs, N.J. 1984. 482 pages. \$44.95 hardcover.

Christine Beall is an architect who cares about masonry. She also cares about getting it right, at least judging by this comprehensive handbook.

Beall sets out to discuss the aesthetic, technical, and environmental considerations involved in masonry construction, including engineering, economics, and quality workmanship. With a few exceptions she succeeds magnificently

by assembling and correlating industry info. While perhaps more exhaustive than concise, the result is a reference that belongs on the shelves of architects, engineers, libraries (especially trade schools), and masons.

Chapter 1 offers a thumbnail history of masonry construction from early Egypt through its decline during the Renaissance, and on into the