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FRONT COVER:
Ikiru (To Live) by Mitsuaki Sora
Aji municipality, Shikoku, Japan photo: T L

INSIDE FRONT COVER:
Kazumi Hoshino, stone sculptor photo: Jesse Salisbury, stone sculptor (and Hoshi’s husband)

INSIDE BACK COVER:
Introductory flyer displaying the first nine Stonexus covers (and the eleventh)

BACK COVER:
Dry stone slate walls of a pit housing a water wheel, Greenburn Mine, Little Langdale, Lake District, England photo: Gavin Rose

stone (ston) n.
1. a. Concreted earthy or mineral matter; rock.
   b. Such concreted matter of a particular type. Often used in combination.
2. A small piece of rock.
3. Rock or piece of rock shaped or finished for a particular purpose, especially a piece of rock that is used in construction.

nex-us (nek’ sas) n., pl. nexi or nex-us-es.
1. A means of connection; a link or tie.
2. A connected series or group.
3. The core or center.

mag-a-zine (mag-úh-zeen), n.
1. A periodical containing a collection of articles, stories, pictures, or other features

FEATURES
FOLLOWING THE OLD STONE ROAD . . . . 31
JAPAN, a Photographic Foray by Tomas and Mimi Lipps
The second of three installments

IS STONEWORK GREEN? . . . . . . . . . . . . 54
A Stonemason’s Take on Sustainability
by Marc Archambault

STONEWORK SYMPOSIUM 2010 . . . . . 58
A report on the 10th annual gathering in Ventura, California and the remarkable Japanese Dry Stone Walling Workshop that preceded it.
Brad Goldberg was a presenter at the 2006 Stonework Symposium in Hood River, Oregon. In the course of a conversation there he mentioned that he was a sculptor with a landscape architectural background.

As a landscape architect who has teamed with artists, I have enormous respect for a relative handful of individuals who have successfully combined technical and artistic training in major projects that dramatically transform our public spaces into memorable places. With degrees in both sculpture and landscape architecture from the Rhode Island School of Design, Brad Goldberg has an understanding of scale, context, and texture and is one of the most notable in this category. The projects he has been responsible for over a period of 35 years are varied and in a multitude of locales. What they share in common is a unique level of both art and craftsmanship.

Brad's website offers an apt description of his approach to his art as an artist whose work is a fusion between sculpture, landscape, urban design, place, culture, and community. It is an art that aspires to escape categorical definitions, restrictions or limitations. Each new project generates a unique response encompassing the total aspect of a specific place or circumstance and may include sculpture, architecture, landscape, water, furniture, etc.

His work reflects a strong interest in archetypal forms—the cycles of nature, the evolution of technology—and examines the metaphor of stone viewed within the span of geologic time while creating people-oriented community spaces. Within this framework, Brad enriches each project with a sense of belonging to its context through beautiful objects imbued with meaning, sensitivity to scale, attention to craftsmanship and simple materials used with evidence of the touch of the human hand.

While Brad has accomplished various art projects incorporating metal, glass, and other materials, his preferred material is stone. He generally prefers to work with stones that are locally available to the sites where he is working—in his home base, Texas, this is limestone and granite. Where no appropriate stone exists, he tries to use a material that works aesthetically with the context. For some projects that material may be granite; on others a different material. Rather than creating a body of work that clearly conveys an identity of a “Brad Goldberg” piece, his 60-plus projects around the country over the past 35 years each have been conceived and created with widely varied qualities, each specific and appropriate to a site. While still undertaking his college studies, Brad completed projects in Austria, France, and Yugoslavia; after graduation his efforts were applied in major projects in Dallas, Houston, Memphis, St. Paul, Wichita, Madison, Minneapolis, Oklahoma City, and many other locations around the country as well as in Japan.

When confronted with such a plethora of unique projects incorporating stone, it is difficult to select specific installations without regretting the lack of space for other equally worthy projects. His website, www.bradgoldberg.com, presents many of his other projects as well as more details and more photographs of the ones shown here.

Craig Campbell, FASLA
PLACE OF ORIGIN
A large earth sculpture using 127,500 cubic meters of fill from the neighboring and historic granite quarry of Kemnay, in Aberdeenshire, Scotland is part of a land reclamation project that draws upon the rich history of the region.

LITURGY
The liturgical elements within a Catholic church in Plano, TX were hand-crafted as traditional forms for religious worship and evoke a return to theological origins.
CONTINUUM
Minneapolis Beautiful Project
US Bancorp Headquarters
This project involved a radical re-design of two blocks of the Nicollet mall and incorporated sculpted solid stone planters along with a stone carpet of black and white granite pavers and three massive vertical monoliths.

MUSEUMS ON THE RIVER
Native Kansas limestone was utilized for a series of structural stone walls identifying each of four museums within the Wichita Museum District adjacent to the Arkansas River.

FAIR PARK STATION (detail)
Fair Park, built for the 1936 Texas Centennial Exposition in Dallas, holds the largest gathering of Art Deco buildings in the world. A new DART light rail station demonstrates a seamless integration of art and architecture that responds to the elegant history of the park.
CORAL EDEN at the Miami International Airport was derived from photographs of brain coral taken by the artist and enlarged to such a huge scale as to create an abstraction that evokes the natural organic forms of the sea life of South Florida.
BROWNFIELD TO GREENFIELD
A 2-acre contaminated ‘Brownfield’ site in West Bend, Wisconsin was converted into a public park that features a circular platform made from black and white granite laid in a basket weave pattern along with granite glacial boulders which represent the local Kettle Moraine topography.

UNIVERSAL CYCLES
*Water Table* (above) graced the main entrance of the Dallas Arboretum and Botanical Gardens. When the building was renovated the location of the entrance was changed and *Water Table* was shut off and abandoned. This is the only extant photo of this sculptural fountain in operation. Though it is out of focus we include it here ‘in memoriam.’
HEALING STONES
Sculptural compositions will grace the east and west entrances of the Minneapolis Children’s Hospital and Clinics. Each composition consists of three different egg-shaped forms symbolizing the ‘raw potential’ of nature. The first is a whole egg form. The second egg is split and a circular solar panel is set in at the angle that receives the most direct energy from the sun. The solar energy collected will power a circular glass lighting element in the third egg form illuminating fossilized aspen leaves layered between colored glass. The artwork creates a metaphor related to the hospital, its charter, its people and the care it provides so that all children can realize their full potential. The fabrication took place in China. As the photo below (by Richard Rhodes) shows, Brad’s involvement in his projects is not limited to concept, design and planning, he takes part in the actual stonework.
The Northamptonshire Crosses

Two almost undamaged Eleanor Crosses still stand, one by a busy road just outside Northampton and the other seventeen miles to the north in the quiet village of Geddington. Both are well worth visiting, and a closer examination reveals them to be much more complex and extraordinary structures than they seem at first glance. Apart from the curiously calm yet lively statues of Queen Eleanor, the first impression is merely of tall and gracefully proportioned shafts, each ending in a sort of spire, and of silhouettes whose interest outweighs any other feature: a familiar characteristic of northern Gothic building, appropriate to our misty atmosphere in which a silhouette is often all that we can see. But a closer scrutiny reveals not only intricate and exotic surface decoration, quite unlike any other Gothic details, but something even stranger: a remarkable superimposition of interrelated geometric forms in the ground plan and cross sections of the successive layers of each monument, exotic forms which have no precedents within the European Gothic tradition.

One cross is basically eight-sided, the other essentially triangular, but these are harsh oversimplifications. At Northampton, the stepped plinth and lower shaft are octagonal. Above them, the sculptures stand with their backs to a square central core which supports a twelve-sided canopy over the figures. The upper shaft is again a simple square in section, while above it is the broken pillar on top is octagonal.

The slender Geddington Cross is even more complex. Its stepped plinth and its lowest course are six-sided, and the apex of an apparently simple triangular shaft rises naturally enough from the central point of three of these six sides. But the sides of the triangular are subtly modelled, each side containing two shallow curved surfaces which, when seen at an angle, inescapably reveal themselves as segments of three cylindrical forms we can imagine embedded within the triangle. The top of each of these three cylinders provides the base for one of the sculptured figures of Queen Eleanor which stand with their backs to the triangular core, now much smaller and inverted. Above this again, at canopy level, the cross is again a simple triangle in section, but further up still the core has yet again been cut away into a twelve-faceted shaft like a six-pointed star in section; yet higher, these six points become the topmost circle of six pinnacles, which forms a delicate crown to the whole beautiful and subtle work.

One can get no idea at all of these subtleties from a photograph, and they are hard to convey simply either in words or in a drawing. But no one walking around the crosses can escape sensing their effect of masterly underlying simplicity and perfection.
Frank the boy left school on the Friday. He had hoped that Lady Luck would turn him into a man by the following Monday but Christmas got in the way. For one thing, he had to wait for the new year to start his first job: apprentice letter cutter in stone.

While waiting, Frank worried if his biceps would be strong enough and how heavy the hammer might be. Can you spit if you get dust in your mouth? Are you allowed to talk at work? How do you ask questions, politely?

Night after night Frank dreamed he was facing his new master who had a Henry Parkes beard and the voice of his old headmaster, rattling with weariness.

“Show-me-your-hands, boy!”

Frank stuck them out, expecting the cane to fall, then turned them over as if for a dirty fingernails inspection.

“Piss on them, boy. Ammonia hardens them up.”

Frank shivered like a newborn pup.

“So you want to be a monumental letter cutter,” said the menacing master. “It can’t be for the money or the pretty girls.”

Finally, Frank’s first day arrived. It was January, 1950, and the early morning haze promised another hot Sydney day. Frank packed two sandwiches and a bottle of cordial into his new brown Gladstone bag. He neatly folded his stonemason’s apron. He had made it himself out of a canvas mailbag, snaffled from his brother’s work. The stencilled words GPO COMMONWEALTH PROPERTY were still visible. He had used copper rivets to fasten one of his father’s old leather belts as a waistband. The apron hung down to his brown boots, its corners scalloped and its edges handsewn with red twine. It sported a solid brass buckle fit for a horse’s harness. He was ready.

He caught the bus to the city and walked through Hyde Park, practising his walking-to-work walk. He checked the Anzac memorial for words cut in stone. Two brown granite dedication stones with gilded letters caught his eye. High up in the sandstone pediment, cut out in relief, was 1914-1918 surrounded by a wreath. He walked past the Archibald Fountain, all bronze and polished brown granite, but no words. Then down Macquarie Street, on the Queen Victoria monument, he spotted more gilded letters on polished grey granite. SYDNEY HOSPITAL announced itself in letters nearly a foot high cut into a sandstone architrave. The statue in front of the Mitchell Library declared Flinders had:

SKILFULLY CHARTED A LARGE PORTION OF THE AUSTRALIAN COAST.

Must have been difficult to chisel letters so small. What happens if you hammer out too much stone?

As he approached the Botanic Gardens he could hear jackhammers and compressors down at Woolloomooloo cutting out a new expressway.

Mr Bramm was sitting on his slabs of sandstone, sipping from his Thermos lid. He stood up and brushed the dust from his right hand on to his trousers. They shook hands and mumbled their names. Mr Bramm cocked his ear to the pneumatic drills.

“They’ve got nine hundred feet of sandstone to cut out. We cut out only a few inches. And with much less noise.”
This book, published last year, features photographs of Staglieno, the magnificent outdoor sculpture museum and monumental cemetery in Genoa, Italy by Walter Arnold, Paulo Marco Guerra and Fely Q. Arnold.

The huge park-like cemetery, established in the mid-nineteenth century, is remarkable for the extreme virtuosity of the sculpture with which it is populated.

As Walter explains in his introduction, “The monuments were group efforts; many specialists were required to bring them to fruition. The skill levels were so high that each particularity would take years, even decades to master. The sculptor would create the design by making drawings and a clay model. Since clay can shrink or shift and is not durable this model was cast in plaster by a formatore or mold maker. In the carving studio a team would work together; the spozzatore roughly out the block and the smodellatore measured from the model, developing all the forms and proportions. Then the pannista would carve the cloth and drapery and the scultore carved the face, hands and complex anatomy. The ornatista, with his precise and delicate hands carved the ornamental details, such as flowers, foliage and lace. The scalpellino, or stone cutter, would do the architectural moldings, geometric work and lettering. When necessary, the raspatore, with rasps and files and the lucidare, the polisher would refine and polish the surface of the marble.

When the carvers were done, the barrocciai, or sculpture transporters, would move these massive delicate masterpieces from the studio to the cemetery in an elaborately orchestrated effort utilizing ox-drawn carts, wooden rollers, iron pry bars, jacks, pulleys and ropes.”

Selecting images from Walter’s book to represent the range of the work represented therein made me aware of how difficult it must have been for him to choose subjects from the thousands of grave sites (117,600) and hundreds of chapels within the walls of Staglieno.

Imagine a world where homeowners, craftsmen, contractors and architects know nothing or next to nothing about the use of lime in the preservation and conservation of historic masonry. This world exists and among its unenlightened inhabitants are individuals who are responsible for maintaining and protecting our architectural heritage.

Patrick McAfee's newest book speaks not only to the people in this lime-less state, but also to those of us, like myself, for whom lime is an integral part of day-to-day business.

*Lime Works*, commissioned by the Building Limes Forum of Ireland, addresses the use of lime in traditional structures (as well as new buildings) from three separate but related perspectives. In this book the author walks us through the various points of view taken by those with different 'roles' to play in the restoration and preservation of masonry, so that those who act in a single capacity have a more comprehensive understanding of the entire situation.

Often we find works on the preservation of historic masonry that were written for specifiers, tradesmen and others that take a technical approach to a historic masonry material such as lime and present it from a standpoint of the chemistry and processes of manufacture, failing to address the countless questions and concerns that pop up in everyday, on-the-job activities.

Pat, as he is known to his many friends and colleagues, is a craftsman of the highest order, a specifier (in his role as a technical consultant and educator of traditional practices) and one who clearly appreciates the concerns of the homeowner or client. A second-generation stonemason, he has been familiar with lime since he began his apprenticeship and over the years has garnered considerable experience in transmitting his knowledge of the subject by way of a large number of seminars and workshops. His experience as craftsman and teacher is what informs this book and makes its subject understandable.

*Lime Works* explores each topic through a series of questions (presumably questions that have been addressed to the Lime Forum or directly to Pat) and informative answers. This format engages the reader much more than a merely technical exposition of the subject would do and leaves him or her, amateur or professional, with a more tangible understanding of the topic.

Part One considers the standpoint of the building owner. The fundamentals of lime, issues dealing with pointing, the whys and why-nots of various building materials are all discussed with clarity—the illustrated lime cycle here is the best I've ever seen.

Part Two addresses historic masonry through the eyes of the craftsman, whether stonemason, brick mason, plasterer, or painter. The overwhelming majority of the information laid out here is universal and there is little that is lost in translation. Turning the page to the brick masonry section though, the reader is quickly transported to the various decorative brick masonry treatments that are common in Ireland, often seen in England and the United Kingdom and occasionally encountered in metropolitan North America but which are rare to non-existent in the rest of the world. I found this exposure delightful and enlightening.

Pat's introductions to lime rendering and plastering (both plain and decorative) are clear and crisp, leaving little to question. The section on lime wash explores the very basics of the practice. A bit of this may be lost on an American reader unfamiliar with the beauty of copperas (ferrous oxide) or other colored lime washes which brighten Ireland's townscapes and countrysides, but the exposure to this and other international practices reminds us how unique our distinct cultural heritages are.

Part Three, written for the specifier, provides the architect, consultant, clerk of works or conservator with the basic understanding of materials and processes. It clearly charts various mortar types, appropriate applications, and mix designs, and answers questions that will occur to 'newbie' specifiers by describing scenarios with which they are likely to be confronted. This is useful, not only to the specifiers, but to those who must work with them.

To an American involved with masonry, particularly restoration masonry, it can seem tiresome to constantly turn to our neighbors across the pond for definitive works on lime and masonry. I have often considered putting my thoughts on the subject to paper, attempting to fill what is, in my opinion, a void in the published material on the subject. After reading a few short chapters in *Lime Works*, however, I put that notion aside. The void has been filled. This is the book I've always wanted to write.

Jeff Price is director of sales and marketing for Virginia Lime Works, manufacturers of traditional lime materials.

*LIME WORKS* is available through Building Limes Forum Ireland at http://www.buildinglimesforumireland.com. It will probably find itself on Amazon someday like Pat's other books: Irish Stone Walls and Stone Buildings.
Originally, plans for our journey around Japan were modest, but as the number of X’s on our map increased, the amount of time we had to visit each place diminished.

Yunago, where the account of our journey left off in the previous issue of the magazine, was the half-way point on the itinerary—and as less than half of the available time remained it was obvious that we could not go to all of the places that interested us.

A difficult decision had to be made at this point: whether 1) to visit the famed gardens at Okayama and search out a particular stone we’d been told about—a magnificent large boulder from an off-shore island that had been split into several pieces which were transported by boat to the mainland and there reassembled—or 2) the Shizutani School and its unique walls with rounded tops. Shizutani was one of sites that Katsumi Ida said should be included in any account of Japanese stonework and as it was only a few miles from the noted ceramic center of Bizen we made our way there.

Shizutani means quiet valley.

In 1666, while on an inspection tour of his domain, Lord Mitsumasa Iida of Bizen was inspired to build here what became the first public school in the world, built upon what was once a public road. The vibrations of passing trucks caused some parts of the wall to loosen. This led to the rearrangement of the site, now designated as a national treasure.
Takamatsu, Shikoku’s second city, is the capital of Kagawa Prefecture located in the northeast corner of Shikoku Island. Takamatsu castle is one of only three Mizujo in Japan—castles built on or in the sea. Completed in the late 16th century, it was demolished in the late 19th except for three turrets, the stone walls and gardens.

From the castle we set off on foot to see and photograph a columnar Noguchi sculpture that was supposedly housed somewhere in City Hall. Arriving there we learned it had been removed and installed in another location across town. The disappointment at not finding the Noguchi was erased by two excellent stone sculptures that we encountered.

Amagoi-jishi (Rain Bringing Lion) was a delight to come upon in Takamatsu Central Park. It radiates power like a totemic Meso-American jaguar. We were surprised to find that it was the work of Masayuki Nagare, the sculptor of the portal featured on the cover of Stonexus IX. (Nagare, now 87, lives and works in Shikoku, but we were unable to arrange a meeting during our all too brief time there.) Wakei Senyaku (Respect, Harmony, Tranquility) an eloquent dualistic sculpture by Genichiro Inokumo, awaited us in the building where we had expected to see the Noguchi. Takamatsu Central Park had some very interesting high quality hardscaping. The wall in the lower photograph on the opposing page is a masterful piece of work.
On the island of Oshima just off the coast of Shikoku there was a quarry 600 feet deep! Or so we had heard. Katagiri-san knew a man who operated a quarry on the island and during our visit in Iwate (see previous installment), Kata phoned him. Would he mind showing us around the island? Not at all.

So Katsura Yano and his daughter Mana met us at the train station and we drove over the bridge to Oshima. Unfortunately, said Katsura, the very deep quarry had been recently closed and, as required by the government, filled, not with water as abandoned quarries in the US and Canada are, but with earth and rock, overburden and waste from neighbouring quarries. But there were other quarries to visit on the island, many other quarries. We began with his.

Katsura had worked as a welder in one of the island’s shipbuilding yards. He also farmed and had an orange grove on what was considered to be a prime location for a granite quarry. No less than seven offers on the land were made by local quarriers. Island society being as it is, to have accepted any one of these would have offended the others, so ultimately he decided to open a quarry himself. In the photo at the right he is answering my question, “How many men work here?” His family and a friend helped remove the trees and he has been helped occasionally by his son, but essentially Katsura runs the operation by himself.
CURIOSITY

The biennial Green Building Guide was due out shortly—the western North Carolina bible of sustainable design, products and construction.

“You’re green,” I was told by a young man, a member of the Green Building Council. “You should totally advertise.” Everyone, but everyone, was in the guide.

“Stone’s not green,” I countered.

“It totally is,” he said. “It’s all natural and it’s local.”

“It’s even renewable,” I replied.

“Totally,” he said. Sarcasm is lost on the earnest.

I didn’t buy it—the concept or the advertising.

To me green building was high-tech: cutting edge composites and recycled content. Green was ethereal: sunlight and wind. Green was gentle: softly harvested lumber and citrus cleansers. Green is new and now.

I work stone. My material is ancient, earthy and often must be wrested from the ground by explosives and flaming diesel. Stonework is old and, by many accounts, over. Stone does renew, but in geologic time. Visit an abandoned quarry and you’ll find rusting cars and spray paint, but no granite seedlings peeking up through the dust.

Metamorphic stone is locally available here in my mountains, but lovely, easy-to-work sandstone is trucked in on flatbeds from neighboring states. Stone lasts a long time when used properly. But sandstone travels all that way just to be stood up on edge in thin veneers, an invitation to water and exfoliation.

This would have been the end of my consideration of stonework as ‘green’ except that the conversation had brought to the surface something that had long troubled me: that my life’s work was a scar upon the earth, that I was a lumbering, destructive beast, ruining my children’s home in order to give them a house.

Could stonework be green? Putting my cynicism aside, I started exploring.

DISCOVERY

A few months later I found myself preparing to do a presentation at a local ‘green conference.’ The conference focused on the construction trades and I was to address how stonework could be more green.

I researched the subject. Statistics abounded. Carbon footprints ran everywhere. Oftentimes the stats were muddy, comparing apples to coal production. Everyone seemed to agree that the fate of mankind was at stake and that someone needed to start making some hard choices.

But how was this flood of minutia going to change anyone’s behavior?

For my presentation, I began with sim-
This, the ninth annual gathering of our stone tribe, was the first to take place in California and the first to be held in the winter. Attendance was down a bit from previous Symposiums due to the current economic climate. The majority of attendees at these affairs are stonemasons and landscape architects and while many might have been idle due to wintry weather and free to attend, they lacked the funds to do so. Hopefully the economy and folks’ personal fortunes will have improved by next year.

Ventura proved to be a great place to hold the Symposium and the walking and carving workshops. It is both picturesque and pleasant, an interesting variation on the coastal Californian community life style. The historic town center of Ventura, where the Symposium events were focused, is small enough that a car, while a convenience, was not a necessity. All of the activities took place within walking or biking distance of the host hotel, the Crowne Plaza, the tall beach-side building catching the sun in the promenade that parallels it.

The local brewery, Anacapa, did a special batch in our honor called Rocknockers’ Ale. Being on the coast was something special for those of us who live inland. The stony beach near the hotel was a playground for us and a source of interest to the townsfolk and visitors strolling along the beach or the promenade that parallels it.

The Japanese Dry Stone Walling Workshop that preceded the Symposium was a worthy successor to those previous building projects. It was an ambitious undertaking, a remarkable experience and an impressive accomplishment.

And, there might be a ‘coda’ to the Symposium: the possibility of another cross-cultural project is being explored. US and Canadian stonemasons would work with their Mexican counterparts to build a masonry system that yields both a tan and a grey-blue sandstone. The latter is fine-grained and homogenous. It splits cleanly and responds well to hand tools. There is a long tradition of stone masonry based on the local sandstone, particularly in nearby Santa Barbara, but the material has never been used as it was in this project. There were more than a few local stonemasons among the townspeople that gathered each day to witness this ongoing performance of stonecraft.

There was no Dry Stone Walling Competition, no Wheelbarrow Steeplechase, no Eye-Balling contests, but the Stone Bowling matches did take place at Art City Studios just after the Symposium when the weather had cleared. Winner and still champion: yours truly. Second place: Paul Lindhard.

Engineers have finally become aware that Flexibility enables Stability and considerable technological effort has been expended developing masonry systems that do not require skilled labor to install. We were fortunate enough to find a sympathetic engineer and to have skilled labor in plenty to hand tools. There is a long tradition of stone masonry based on the local sandstone, particularly in nearby Santa Barbara, but the material has never been used as it was in this project. There were more than a few local stonemasons among the townspeople that gathered each day to witness this ongoing performance of stonecraft.

Prior Symposiums have been associated with workshops during which building projects were undertaken and completed. At the second Symposium in 2001 in the course of the first-ever dry stone walling competition in the US, a free-standing dry stone wall 90 feet long was built—in a single day. These permanent stone wall installations were legacies left to the communities in which our annual gatherings took place.