EDITORIAL .................. 2
ARCH-TYPES (reprint)
Pages from the classic Guide to the Art of Stone Cutting by Wm R. Purchase . . . . 16
ANNOUNCEMENT
STONEWORK SYMPOSIUM 2017
and the 1ST MEDSTONE CONGRESS . . 24
TEKTONIKA
PHOTO GALLERY
Jo Kley, Prolithic Stone Sculptor . . . . 29

FEATURES
THE JOURNEYMAN STONECUTTERS
ASSOCIATION OF NORTH AMERICA
by Walter Arnold ......................... 3
THE GATHERING OF STONES
A Tribal Assembly
by Sunny Wieler and Ken Curran . . . . . 4
REFLECTIONS ON EQUILIBRIUM
Mallorcan Dry Stone Walling
by Tomas Lipps ......................... 27
SLATELANDIA
Stone Structures of the
North Wales Slate Industry
by Sean Adcock ......................... 42
PERAMBLATING AROUND INDONESIA
Part 1: BOROBUDUR and PRAMBANAN
by Tomas Lipps ......................... 52

stonexus xv
ARCHES AND JOINTS

FIG. 4

FIG. 5

FIG. 6

FIG. 7

FIG. 8
**JO KLEY, STONE SCULPTOR**

**energy in form...**

**ART/ENERGY**
We ourselves should constantly be aware of the significance of the term ‘freedom of art’ and we should defend this freedom as our utmost concern. Therefore I am free to state that an excellent stone sculpture embodies both a material and at the same time an immaterial energy; as a result I understand these kinds of objects as: energy in form!

What do I do? Normally I try to give the stone a fitting form using the means available to me. The work process opens my eyes and my perception. While I am working—chiseling, polishing, and making dust—new ideas arise for the next forms. For me the work process is at least as exciting as the finished sculpture. The form which remains at the end tells of its conception, revealing or mystifying—for at the end a small secret always remains. The form needs to have a certain power, it needs to breathe and be alive, to attract the observer’s attention. I see my work as constant practising, working at my manual skills as well as tackling the material. And stone is my favourite material to work with. Marble, granite, limestone, alabaster...the palette is infinite, so it always presents a new challenge to find the most appropriate form.
Ancient Greece . . .
Its art and its gods have fascinated me and have provided inspiration for a series of sculptures modeled on the classical deities.

clockwise from top left:
DEMETER
red granite h: 40 cm
VENUS and ADONIS
limestone and Carrara marble
h: 55 cm and 60 cm
HERMES
marble, Portugal h: 30 cm
ATHENE
marble, Carrara h: 60 cm
DIONYSOS
red marble h: 60 cm
ZEUS
marble, Carrara h: 55 cm
The Gathering, Ireland 2013 began as a State-backed tourism drive but became much more as it was embraced, shaped and directed by the Irish people themselves. Aimed at encouraging the Irish diaspora to return to Ireland, The Gathering was not a single event but an umbrella framework within which the grassroots initiatives of private individuals and non-governmental organisations resulting in more than 5,000 varied activities nationwide, including family reunions, community gatherings, sports, arts and cultural events.

Conception:
Remember, remember, the third week of September!

Annually for ten years during the third week in September Inis Oírr, one of the Aran Islands off the west coast of Ireland, has hosted a convergence of the stone tribe—the Féile na gCloch (Festival of Stone).

Inis Oírr is overlaid by the densest concentration of dry stone walls in the country. It is a very special place for lovers of dry stone and those who attend leave feeling revitalized and more enthusiastic about the craft than ever.

The camaraderie and passion for the craft experienced on the island inspired the Dry Stone Wall Association of Ireland’s members and fueled a desire to hold similar events across the country that would promote Irish dry stone heritage and the practice of the craft itself.

In 2012, Tomas Lipps, Director of the international Stone Foundation was invited to speak at Féile na gCloch. After the festival Sunny Wieler, Chairman of the DSWAI, invited Tomas to stay with him in Dublin while he conducted research for the articles he would write about Irish stonework for STONEXUS magazine in issues xII and xIII.

The Gathering of Stones Organizing Committee fostered the development of the concept to a prospective design. Agreement was reached on certain key elements:

- A circle, or circles.
- A Midlands location.
- Various types of stone gathered from the four provinces.
- The incorporation of several walling styles and other features.
- The creation of a monument to Irish culture and Ireland’s dry stone heritage.

Communications between the early initiators and the newly formed Gathering of Stones Organizing Committee fostered the development of the concept to a prospective design. Agreement was reached on certain key elements:

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STONE STRUCTURES
OF THE NORTH WALES SLATE INDUSTRY

by Sean Adcock

Much of the United Kingdom’s cultural heritage is inextricably linked to industry. In South Wales the development of the coal industry helped mould communities and landscapes; in North Wales the exploitation of slate played a similar role. Throughout the 19th century North Wales dominated world slate production and several hundred quarries operated at one time or another. The waste heaps of these quarries still mark the countryside, providing an indelible reminder of the past.

Today most towns and villages in and around the quarrying areas contain terraces of distinctive small stone quarrymen’s cottages; in some instances whole villages are essentially comprised of such cottages. At Mynydd Llandegai near Bethesda two parallel rows of cottages were built for local quarrymen each with an acre of land creating a regular rectilinear pattern of fields bounded by dry stone walls and slate pillar fences, making a signal contribution to the landscape.

It is likely that this concept developed from tyddynod or smallholdings located alongside the quarries during their early development as workers eked out a subsistence living from quarry and land. This created a distinctive landscape wherein many of the cottages sit derelict today in a patchwork of small fields with decaying networks of dry stone walls.

The need for quarry housing was notable within the quarries too and remains of lime mortared barracks—rows of houses used as week-day accommodation by those who lived too far away to walk to and from work on a daily basis—are relatively commonplace. In Rhin Bach, high above the already remote Penmachno slate workings, the quarry even contained its own small village.

Deserted in 1953, it still contains almost complete remains of houses, streets, church-cum-school, dry stone garden walls, sheds and even a dry stone post and rail fence.

All quarries required a range of buildings in order to carry out their work. These were inevitably built from the most convenient raw material—slate. Most quarries have the remains of some buildings. Dry stone blast-shelters with their thick walls have survived the ravages of time well and smaller dry stone buildings such as garderobes and toilets can occasionally be found perched on walls alongside waste heaps.

Many quarries had retaining walls of some description. Commonplace are the impressive remains of 2 and 3 metre walls that formed tramway embankments, created terraces or platforms, eked workspace from a hillside and retained slate waste.

Other structures can be found with the vast numbers of quarries giving rise to a diversity of remains. Examples include corbelled arches, voussoired arches, lintelled passages through walls, inlines, canalised water races and ‘launder pillars’ built to get water to water wheels housed in stone pits or towers. At the National Slate Museum in Llanberis the largest (and still operating) water wheel on the British mainland is housed in a dry stone tower that was built in 1870 and is over 8 metres high.

The need to provide access to various levels has led to a plethora of staircases. One large, impressive set in Dinorwic runs for two hundred metres at an average gradient of around 1:3.

Abandoned quarries such as Dinorwic, facing page, and Rhosydd, shown above, contain impressive wonders of the walling milieu. These quarries are a mile and a half to two miles long.
right and above: The famous overhanging ‘wailing wall’ at the Gorseddau quarry in Cwm Ystraddlyn. It borders a tramway, protecting it from waste spillage. Why it is curving out rather than leaning in is a matter of conjecture. An interesting idea put to me recently suggests it could be the up-hill portion of a long corbelled vault-to-be, half of a structure that would provide the continuing passage of the tram through a tunnel whilst enabling the quarry to dispose of thousands of tons of waste overhead. It would then resemble the much shorter passage shown above, at Hafod y Wern (Bethesda) built as part of a narrow work platform.

far right, above: Leaning like drunken sailors is a procession of ‘launder pillars’ at Hafod y Wern quarry. Remnants of an industrial age aqueduct, these pillars supported the troughs that brought water from its source to turn the wheels that powered the machinery.

bottom right: The entry to the ‘dead-end tunnel’ that traversed the raised A incline at Dinorwic quarry (see page 44) until waste was dumped to one side and the incline became a retaining wall.

below: Masterful stonemasonry—a carefully built structure at Rhosydd quarry, purpose unknown.
THE BOROBUDUR TEMPLE COMPOUND

is one of the greatest Buddhist monuments in the world. It was built in the 8th and 9th centuries AD during the reign of the Syailendra Dynasty. The monument is located in the Kedu Valley, in the southern part of Central Java, Indonesia.

The main temple is a stupa built in three tiers around a hill which was a natural center: a pyramidal base with five concentric square terraces, the trunk of a cone with three circular platforms and, at the top, a monumental stupa. The walls and balustrades are decorated with fine low reliefs, covering a total surface area of 2,520 square meters. Around the circular platforms are 72 openwork stupas, each containing a statue of the Buddha.

The vertical division of Borobudur Temple into base, body, and superstructure perfectly accords with the conception of the Universe in Buddhist cosmology. It is believed that the universe is divided into three superimposing spheres, kamadhatu, rupadhatu, and arupadhatu, representing respectively the sphere of desires where we are bound to our impulses, the sphere of forms where we abandon our desires but are still bound to name and form, and the sphere of formlessness where there is no longer either name or form. At Borobudur Temple, the kamadhatu is represented by the base, the rupadhatu by the five square terraces, and the arupadhatu by the three circular platforms as well as the big stupa. The whole structure shows a unique blending of the very central ideas of ancestor worship, related to the idea of a terraced mountain, combined with the Buddhist concept of attaining Nirvana.

The Temple should also be seen as an outstanding monument of the Bhuddist Syailendra Dynasty that ruled Java for around 5 centuries until the 10th century. The Borobudur Temple Compound consists of three monuments: namely the Borobudur Temple and two smaller temples situated to the east on a straight axis to Borobudur. The two temples are Mendut Temple, whose depiction of Buddha is represented by a formidable monolith accompanied by two Bodhisattvas, and Pawon Temple, a smaller temple whose inner space does not reveal which deity might have been the object of worship. Those three monuments represent phases in the attainment of Nirvana.

The compound was used as a Buddhist temple from its construction until sometime between the 10th and 14th centuries when it was abandoned. Since its re-discovery in the 19th century and restoration in the 20th century, it is again a Buddhist archaeological site.

**Criterion (i):**
Borobudur Temple Compound with its stepped, unroofed pyramid consisting of ten superimposing terraces, crowned by a large bell-shaped dome is a harmonious marriage of stupas, temple and mountain that is a masterpiece of Buddhist architecture and monumental art.

**Criterion (ii):**
Borobudur Temple Compound is an outstanding example of Indonesia’s art and architecture from between the early 8th and late 9th centuries that exerted considerable influence on an architectural revival between the mid-13th and early 16th centuries.

**Criterion (iii):**
Laid out in the form of a lotus, the sacred flower of Buddha, Borobudur Temple Compound is an exceptional reflection of a blending of the very central idea of indigenous ancestor worship and the Buddhist concept of attaining Nirvana. The ten mounting terraces of the entire structure correspond to the successive stages that the Bodhisattva has to achieve before attaining to Buddhahood.

The boundaries contain the three temples that include the imaginary axis between them. Although the visual links are no longer open, the dynamic function between the three monuments, Borobudur Temple, Mendut Temple, and Pawon Temple is maintained.

There is a growing rate of deterioration of the building stone, the cause of which needs further research. There is also a small degree of damage caused by unsupervised visitors. The eruption of Mount Merapi is also considered as one of the potential threats because of its deposit acidic ash as happened in 2010.

The original materials were used to reconstruct the temple in two phases in the 20th century: after the turn of the century and more recently (1973-1983). Mostly original materials were used with some additions to consolidate the monument and ensure proper drainage which has not had any significant adverse impact on the value of the property. Though the present state of Borobudur Temple is the result of restorations, it retained more than enough original material when re-discovered to make a reconstruction possible.

This succinct synthesis is from Borobudur Temple Compound, a UNESCO document. photos by Tomas Lipps unless otherwise attributed
In 1882 concern for the monument’s deterioration prompted a proposal to demolish it, remove the reliefs and install them in a museum. This radical plan was rejected when a somewhat more positive report on the monument’s condition was made.

The surprising discovery in 1889 by Dutch engineer J.W. Yzerman of the structure’s original base—replete with hundreds of linear metres of carved reliefs which had been buried in the act of widening the base—brought renewed interest in Chandi Borobudur. (See page 61.)

Despite this, when King Chulalongkorn of Siam visited Borobudur in 1896, the Dutch gave him eight wagon loads of statues and bas-reliefs to take home, including five of the best Buddhas and two complete lions. These now reside in the National Museum in Bangkok. In 1898 a Mr. L. Serrurier stated “…the best procedure is to carefully sprinkle all of the upper part of the temple with dilute sulphuric acid since this kills all living organisms.” (No comment on what it would do to the stone.) By this time a crustaceous moss or lichen had become a problem, enveloping entire galleries with grey/green growth. Other chemicals were used, but not named; record keeping was less than diligent.

The excavations and removal of accumulated soil and vegetation by Cornelius and Hartmann exposed stones that had been buried, hidden from sight for centuries. Once safe beneath a mound of bio-mass, they were now vulnerable to scavenging by enterprising locals (and foreign royalty) and began to migrate away from the ill-managed site.

Meanwhile, “Yzerman’s discovery in 1885 finally led to a government decision to take up seriously the problem of physically safeguarding Borobudur, and a Commission of three was set up in 1900. Dr. Brandes, a brilliant art historian, was appointed Chairman. The other two members were van Erp, an army engineer officer, and Van de Kamer, a construction engineer in the Department of Public Works.”

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“The Case of the Unfinished Buddha and the Questionable Finial.

H.C. Cornelius during his initial investigations in 1814 reported having observed the large hole in the east side of the great stupa. He did not mention having found anything within it. In 1834 an aristocratic European visitor described a broken stupa devoid of artifacts. It is said that when, in 1842, H.C. Hartmann entered the great stupa, he found only an ill-formed Buddha statue and removed it.

But Hartmann himself left no record, at least none that survived, of finding such a Buddha—that is known only through accounts given by the villagers. Nor is there any indication where, and in what way, the statue was situated therein.

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above: The giant head with no lower jaw, the arched portal with the sea-dragons or Makara at the base on either side—these are elements of the Kala-Makara, a style then current in northern India. This portal opens onto the upper level and terraces on which stand the central stupa surrounded by three rings of Buddhas, 72 in all, sitting within perforated stone stupas.

Facing page: The central stupa and the smaller perforated ones that surround it, one of which has been left open to show the Buddha within. For some reason the apertures in the lower two rings are diamond-shaped, those in the upper ring are square.

below: Cross section through Chandi Borobudur.
image by Gunawan Kartapranata via Creative Commons
Hinduism and Buddhism have common origins in the Ganges culture of northern India—Siddhartha Gautama, he who became the Buddha, was born and raised in the Hindu faith. The two faiths share similar beliefs and practices, so perhaps it should not be surprising that a Hindu complement to Borobudur should evolve only 50 miles away, or that it would equal it in mass, architectural grandeur and spiritual power—like a binary star system in a distant galaxy.

The Shailendras, Buddhist kings and the Sanjayas, Hindu ones are thought to be two branches of the same dynasty. The Buddhists built temples on the Kedu Plain while the Hindu branch ruled the mountain regions of central Java. In 850 a Buddhist princess married a Hindu prince and the pair jointly erected temples throughout the land.

Their structural character differs—Prambanan is a complex of temples with soaring parabolic profiles with elaborately articulated surfaces; pyramidal Borobudur is singular in context and has a low profile, similar in silhouette to the four volcanoes that surround it.

But they have so much in common, such as the galleries around the monuments enlivened by narrative panels and the stepped entrances to the portals with the Kala-makara motifs which are nearly identical. In both Borobudur and Prambanan there are similarities in the cast of characters, the costumes and accoutrements, the body postures and hand gestures of the figures in the reliefs—these constitute idioms in a shared visual language and suggest an exchange of builders and artists between the two groups.

The 7th, 8th and 9th centuries in central Java were undoubtedly a cultural 'golden age' and a good time and place for stonemasons and carvers to live and work—much as the 11th to 15th centuries—the age of cathedral building—were in Europe.