



**Circular No 9
February 2015**

www.globalheritagestone.org

**Information and discussion on the 'Global Heritage Stone Resource' (GHSR)
a new international designation recognising natural stone resources
that have achieved widespread utilisation in human culture**

**This project operates as a "Task Group" of the "International Union of Geological Sciences" (IUGS) and
under "Commission C-10 Building Stones and Ornamental Rocks
of the International Association of Engineering Geology and the Environment" (IAEG C-10)**

President: Björn Schouenborg **Email:** bjorn.schouenborg@cbi.se
Secretary General: Barry Cooper **Email:** barry.cooper@unisa.edu.au

OPENING MESSAGE

It has been too long since I have last provided news of HSTG via this Circular. In future, it is hoped that this Circular will be produced biannually in February and August.

Fortunately all Correspondents will have received our new Newsletter, compiled edited by Lola Pereira and Björn Schouenborg in December 2014.

Over the past year HSTG Board members have been very involved in gathering, reviewing and editing an initial volume of papers on heritage stone as a Special Paper of the Geological Society of London. It will be entitled "Global Heritage Stone: Towards international recognition of building and ornamental stones". Please plan to acquire your copy.

In addition heritage stone papers were published in the volume of papers published for 12th IAEG conference in Turin, Italy in September 2014. As noted below, other publications are planned.

In the past few months, HSTG has lodged an application for funding under the International Geoscience Program (or IGCP). We await the result of this application.

For the future, we would welcome your participation in one or more of coming heritage stone meetings that are indicated below.

As of 1 February 2015 HSTG has 224 correspondents from 50 countries. As per routine, please feel free to nominate additional HSTG Corresponding Members at any time. In recent months I have asking all new applicants to fill out an "HSTG Information Form".

Barry Cooper
Secretary General

SUMMARY DIARY OF FUTURE HERITAGE STONE MEETINGS

April 12-17, 2015

The European Geoscience Union (EGU) General Assembly to be held in Vienna, Austria has a session entitled “Natural stone research and Heritage stone designation”. A separate “Splinter Group Meeting” will consider present and future HSTG activities. Please see www.egu2015.eu/ for details. The abstract deadline has now closed.

May 19-20, 2015

The North Central Section meeting of the Geological Society of America to be held, in Madison, Wisconsin, USA is featuring heritage stone in a session entitled “Cultural Geology and Geoarchaeology: Millstones, Dimension Stones, Capitol Buildings, Heritage Stone, and More” Please see the website www.geosociety.org/Sections/nc/2015mtg/techprog.htm . The abstract deadline is now closed.

September 22-26, 2015

International Congress – Geoheritage Inventories: Challenges, Achievements and perspectives, Muséum de Toulouse, France. Please see details at www.progeo.se/Toulouse-2015_Flyer_Geo_inv_2015_LEGER2.pdf .The abstract deadline has now closed.

November 1-4, 2015

A Heritage Stone conference is being planned for the first time as part of the Annual General Meeting of the Geological Society of America in Baltimore, Maryland USA. Please watch www.geosociety.org/meetings/ for details. Abstract submission is likely to be 1 April 2015 – 11 August 2015.

August 27– September 4, 2016

A major 2016 heritage stone conference will be linked with the 35th International Geological Congress to be held in Cape Town, South Africa. Abstract submissions open April 2015.

Other potential heritage stone meetings during 2016 will be associated with the European Geoscience Union (EGU) General Assembly in Vienna, in April 2016 and with the Australian Earth Sciences Convention in Adelaide, Australia in June 2016.

EGU GENERAL ASSEMBLY, VIENNA, AUSTRIA 12-17 APRIL 2015

A “Splinter Group” meeting is planned on Thursday afternoon 16 April that will allow discussion of all HSTG business issues.

On Wednesday afternoon 15 April, HSTG presentations will be offered in the session entitled “Natural stone research and heritage stone designation”

The following presentations (with authors) have been accepted

- “Importance of the use of original natural stone in restoration of historical buildings and the value of Global Heritage Stone Resource Designation” By Dolores Pereira, Brian Marker, Juanjo Tejado, and Maribel Mota
- “Extremadura (Spain): a case to be considered as Global Heritage Stone Province” By Maribel Mota, Juanjo Tejado, and Dolores Pereira

- “Ornamental Stones and Gemstones: The limits of heritage stone designation: The case for and against Australian Precious Opal” By Barry Cooper
- “Recent Utilization of μ focus X-Ray CT for Voids Space Evaluation in Geomaterials” By Manabu Takahashi, Minoru Sato, and Ryo Anma
- “Rapakivi Granite: An architectural emblem of St Petersburg and its utilisation in other world cities” By Andrey Bulakh, Vladimir Gavrilenko, and Helen Panova
- “The region of the Piedra Berroqueña: A potential Global Heritage Stone Province” By David Martin Freire-Lista and Rafael Fort
- “Zarzalejo granite (Spain). A nomination for “Global Heritage Stone Resource” By David Martin Freire Lista, Rafael Fort, and María José Varas-Muriel
- “Isotope characterisation of historical alabaster quarries in Western Europe”. By Wolfram Kloppmann, Lise Leroux, Philippe Bromblet, Anthony H. Cooper, Angela Nestler, Catherine Guerrot, Anne-Thérèse Montech, and Noel Worley
- “Silicified Granites (Bleeding Stone and Ochre Granite) as Global Heritage Stones Resources from Avila (Central of Spain)” By Jacinta Garcia-Talegon, Adolfo C. Iñigo, Santiago Vicente-Tavera, and Eloy Molina-Ballesteros
- “Quartzite of historic buildings in Brazil: designations and degradation patterns” By Antônio Costa
- “Contribution in support of a Global Heritage Stone designation for the Leitha Limestone s.l. of eastern Austria because of its use in Roman times” By Beatrix Moshammer and Andreas Rohatsch
- “Granodiorite - one of the most significant Slovenian natural stones” By Sabina Kramar, Mirka Trajanova, Nastja Rogan-Šmuc, Maja Gutman, Mojca Bedjanič, and Ana Mladenovič
- “Ancient sandstone condition assessment in relation to degradation, cleaning and consolidation phenomena” By Miloš Drdácký, Dita Frankeová, and Zuzana Slížková
- “Modern methods of documentation for conservation - digital mapping in metigo® MAP, Software for documentation, mapping and quantity survey and analysis” By Gunnar Siedler and Sebastian Vetter
- “Effect of environmental conditions on the decay of stone in archaeological site of Volubilis – Morocco” By Issam Aalil, Ali Chaaba, Khalid Cherkaoui, Xavier Brunetaud, Kevin Beck, and Muzahim Al-Mukhtar
- “The Dora-Maira Unit (Italian Cottian Alps): a reservoir of ornamental stones locally and worldwide employed since Roman age” By Alessandro Borghi, Paola Cadoppi, and Giovanna Antonella Dino
- “Proper dimensioning of stone paving slabs” By Björn Schouenborg, Karl-Johan Loorents, Jörgen Larsson, and Terje Holstad
- Luserna Stone: A nomination for “Global Heritage Stone Resource” By Piero Primavori
- “Geomaterials and architecture of the medieval monuments of Sardinia (Italy): petrophysical investigations on their construction materials and documentation on the architectonic aspects using digital technologies” By Stefano Columbu and Giorgio Verdiani

- “The “green stones” of Valtellina and Valchiavenna (central Alps, northern Italy)”
Alessandro Cavallo
- “Geochemical, petrographic and physical characterizations and associated alterations of the volcanic rocks of the Romanesque San Nicola Church (Ottana, central Sardinia, Italy)” By Stefano Columbu, Marcella Palomba, and Fabio Sitzia
- “Candoglia Marble and the "Veneranda Fabbrica del Duomo di Milano": a resource for Global Heritage Stone Designation in the Italian Alps” By Alessandro Borghi, Daniele Castelli, Elio Corbetta, and Giovanna Antonella Dino
- “The Alta schist, North Norway: unique rock with unique history” By Tom Heldal, Kari Aasly, and Gurli Meyer
- “Use of microorganisms to improve the cementation of granular structures. Applications in the restoration of monuments” By Isabel González, Eduardo Mayoral, Pilar Ortiz, Dolores Segura, Auxiliadora Vazquez, Cinta Barba, Rocio Ortiz, and Antonio Romero
- “The white marble used in Brasília, a World Heritage and the capital of Brazil” By Maria Heloisa Barros de Oliveira Frascá
- “The Swedish Bohus granite - a stone with a fascinating history” By Björn Schouenborg and Thomas Eliasson
- “Sienite and Diorite stone a unique heritage in the north of Italy” By Alice Tori1, Paola Marini, Lorena Zichella and Rossana Bellopede

It should be an excellent session.

HERITAGE STONE CONFERENCE, MADISON, WISCONSIN, USA
19-20 MAY 19-20

The following presentations are planned in a session entitled “Cultural Geology and Geoarchaeology: Millstones, Dimension Stones, Capitol Buildings, Heritage Stone, and More”

- “Dimension stone and twentieth century built heritage; durability evaluation using regional comparisons of climatic data” By Kyle Normandin
- “Tooling-Induced alteration of Dimension Stone: Comparison of traditional tooling and computer-controlled methods” By Brad Shotwell, Karla Kruse and James Durham
- “Widespread North American (United States and Canada) occurrence of Millstones made of imported French chert (Meulière, French Buhr) containing charophytes” By Joseph T Hannibal
- “Norwegian mica-schist millstones in Wisconsin and Iowa: a rare type of imported millstone” By Joseph T Hannibal
- “History and geology of the Shawangunk Millstone Industry, Ulster County, New York” By Steven H Schimrich

- “Are the recently redefined Dayton Formation (Silurian, Llandovery, Telychian) and Dayton Limestone of Orton, the celebrated building stone of Ohio, the same formation, or is a limestone below the Dayton Formation at John Bryan State Park the Dayton Limestone?” By Mark A. Kleffner.
- “Delaying the inevitable: protective treatments for architectural stone” By Joshua Freedland,

This should be a good meeting also.

HERITAGE STONE CONFERENCE -BALTIMORE, MARYLAND, USA – 1-4 NOVEMBER 2015

The principal Heritage Stone conference in 2015 has been planned as part of Annual General Meeting of the Geological Society of America to be held in Baltimore, Maryland, USA, 1-4 November 2015. Abstract submission is likely to be 1 April 2015 – 11 August 2015.

The planned session is entitled “Dimension stone and heritage stone: Quarries, building stones, monuments, sculpture, utilitarian stones and more”.

Three heritage stone field trips are also being planned including heritage stone tours of Baltimore and Washington DC as well as an active local stone quarry.

An HSTG Business Meeting will be likely be held during the conference.

This HSTG Conference session has attracted sponsorship from both the “Environmental and Engineering Geology” and the “Geology and Society” Divisions of the Geological Society of America, so good participation is likely.

Obviously all correspondents are welcome to participate in this conference. Further details are available via www.geosociety.org/meetings/.

35th INTERNATIONAL GEOLOGICAL CONGRESS, CAPE TOWN, SOUTH AFRICA - 27 AUGUST–4 SEPTEMBER, 2016

The major meeting of HSTG for 2016 will be a session at the International Geological Congress held in Cape Town, South Africa.

Session proposals are currently being entertained and HSTG has submitted a proposal dealing with dimension stone evaluation.

A field trip examining “black granite quarries” is also being considered. In addition a day field trip entitled “Building Stones of Cape town” has been planned.

For up-to-date information on our Cape Town meeting contact our Vice President Africa Phil Paige-Green at email: ppaigegreenconsult@gmail.com .

General information on the 35IGC is available at www.35igc.org/

HSTG BOARD APPROVAL OF GHSR NOMINATIONS

As per HSTG Terms of References, the HSTG Board has the authority to formally designate a “Global Heritage Stone Resource”.

The HSTG Board is currently considering the nomination of Portland Stone from the United Kingdom as a GHSR.

As this is the first nomination to be considered it is taking longer time than anticipated in our last Circular.

Over the past 12 months, the HSTG Board has agreed that:

- An independent assessment of each GHSR nomination be obtained excluding members of the HSTG Board.
- The GHSR Review Form circulated with Circular 8 be revised and approved.
- Two independent assessors be selected and they be sent the revised Review Form and associated Portland Stone research paper.

With publication of the Heritage Stone Special Publication of the Geological Society of London additional research papers will be published and the assessment of additional nominations will be facilitated.

REVISED GHSR & GHSP CHECKLISTS

During the meeting held in Turin, Italy during September 2014, there was an extensive discussion and review of HSTG affairs in a scheduled IAEG C-10/HSTG “Workshop”.

Piero Primavori (Italy) provided a valuable assessment of the Check Lists that HSTG correspondents use to nominate a Global Heritage Stone Resource or a Global, Heritage Province.

As a consequence of this assessment, the GHSR and GHSP Check Lists have been revised to suggest that the following data may also be valuable:

- Production Details (Details on the status and amount of stone production)
- Manufacturing information (Details on the location of stone processing and whether it occurs primarily local, regional or international)
- Commercial Diffusion: (Details on recent international exports)

All correspondents are asked to review the revised Check Lists which are attached and to provide further comment to the Secretary General if desired.

REGISTER OF HSTG CORRESPONDENTS

After our last Circular, a request was issued requesting additional information about HSTG Correspondents. Consequently a list of HSTG Correspondents has been compiled and listed under Country, Name Address and Email. This list is attached.

If you are a Correspondent whose details are not complete, please fill out the attached Information Request Form and return to the Secretary General.

It is helpful if we know more about our Correspondents and their interests in stone.

INAUGURAL HERITAGE STONE VOLUME – GEOLOGICAL SOCIETY OF LONDON

Editing and compilation of the first heritage stone volume is complete under the title: “Global Heritage Stone: Towards international recognition of building and ornamental stones”. Currently the volume is available on line at <http://sp.lyellcollection.org/online-first/407>

The book includes many presentations that were first given at the Heritage Stone Conference held in Vienna, Austria in April 2013. It will be printed as Special Paper 407 of the Geological Society of London in the next few months.

The book has been designed as the first of several volumes that will discuss and document heritage stone.

OTHER HERITAGE STONE PUBLICATIONS

Heritage stone papers were published in the volume of papers entitled “Engineering Geology for Society and Territory – Volume 5 for the 12th IAEG conference held in Turin, Italy. September 2014.

A Special Heritage Stone issue of the journal “Episodes” will also be published in June 2015 edited by Lola Pereira. This is based largely on presentations made to the heritage stone session at the EGU conference held in Vienna in April 2014.

The Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) is also compiling a book entitled “Stone Heritages in East and Southeast Asia”. Chapters dealing with Indonesia, Japan, Korea, Malaysia, Papua New Guinea, Thailand, Vietnam have been edited and contributions from Cambodia, Laos and the Philippines are planned. Planned publication date for this volume is July 2015.

A special heritage stone issue of “Geoscience Canada” is being planned for March 2016 with selected contributions from the EGU 2015 meeting in Vienna. Publication will be coordinated by Brian Pratt and Lola Pereira (Guest Editors).

IGCP PROJECT APPLICATION (2015-2019)

Advice has been received that HSTG could better achieve its aims if additional funding were obtained via a project of the “International Geoscience Programme (IGCP) funded by UNESCO.

As a result an IGCP project application has been completed and submitted by HSTG before the 2014 deadline date of 15 October 2014.

If successful, IGCP funding will be judiciously utilised especially to attract involvement from the large community of stone professionals in developing countries.

HSTG BOARD MEMBERS, 2012-2016

President (ex officio Chair IAEG C-10)

Dr Björn Schouenborg
Materials Department
SP Swedish National Testing and Research Institute
Box 857, SE-501 15 BORÅS, SWEDEN
Email: bjorn.schouenborg@cbi.se

Secretary General

Dr Barry J. Cooper
Barbara Hardy Institute
Department of Natural and Built Environments
University of South Australia
Adelaide SA 5001 AUSTRALIA
Email: barry.cooper@unisa.edu.au

Vice President Southern Europe

Professor Dolores Pereira
Institute for Science and Technology Studies
Universidad de Salamanca
37008 Salamanca, SPAIN
Email: mdp@usal.es

Vice President Central Europe

Dr Sabina Kramar
Slovenian National Building and Civil Engineering Institute,
Dimičeva 12, 1000 Ljubljana, SLOVENIA
Email: sabina.kramar@zag.si

Vice President Western Europe

Prof. dr. Jan Elsen
Department of Earth & Environmental Sciences
K.U.Leuven
Geo-instituut - Postbus 2410
Celestijnenlaan 200E - B-3001 Heverlee BELGIUM
Email: jan.elsen@geo.kuleuven.be

Vice President North America

Dr Joseph T. Hannibal
Cleveland Museum of Natural History
1 Wade Oval Drive
Cleveland OH 44106-1767 USA
Email: jhannibal@cmnh.org

Vice President North America

Professor Brian R. Pratt
Department of Geological Sciences
University of Saskatchewan
114 Science Place
Saskatoon, Saskatchewan S7N 5E2
CANADA
Email: brian.pratt@usask.ca

Vice President North America

Dr Nelson R. Shaffer
Indiana Geological Survey
611 N. Walnut Grove Ave.
Bloomington, IN 47405, USA
Email: shaffern@indiana.edu

Vice President South America

Professor Fabiano Cabañas Navarro
Institute of Science and Technology
UNIFAL - Federal University of Alfenas
Campus Poços de Caldas, MG
BRAZIL
Email: fabiano.navarro@unifal-mg.edu.br

Vice President East Asia

Dr Hirokazu Kato
Central 7, 1-1-1 Higashi Tsukuba,
Ibaraki, 305-8567,
Geological Survey of Japan,
AIST(Advanced Industrial Science and Technology)
JAPAN
Email: h.katou@aist.go.jp

Vice President South Asia

Prof M.Jayananda
Department of Geology, Centre of Advanced Studies
University of Delhi, Delhi - 110 007
INDIA

Vice President Africa

Prof Phil Paige-Green
Paige-Green Consulting (Pty) Ltd
Postnet Suite # 89
Elardus Park 0047
SOUTH AFRICA
Email: ppaigegreenconsult@gmail.com

Member

Dr Brian R. Marker
Independent Consultant
40 Kingsdown Ave London W13 9PT
UNITED KINGDOM
Email: brian@amarker.freeserve.co.uk

PLEASE ADDRESS ALL CORRESPONDENCE TO THE HSTG SECRETARY GENERAL, WHO IS ALSO EDITOR AND COMPILER OF THIS CIRCULAR