



Sunset over Braga. From the venue of the conference dinner, Bom Jesus. Photo: <http://www.dct.uminho.pt/cct/progeo2005/>

Report of the IV International Symposium ProGEO on the Conservation of the Geological Heritage

13-16 September 2005
Braga – Portugal

W.A.P. Wimbledon & J.B. Brilha

The IV International Symposium ProGEO on the Conservation of the Geological Heritage was held between 13-16 September 2005 at the University of Minho (Braga, Portugal), organised by ProGEO (European

Association for the Conservation of the Geological Heritage) and by the Earth Sciences Department of the University of Minho. The Braga symposium builds on the earlier International Symposia, at Digne (1991), Roma (1996), and Madrid (1999), and at ProGEO conferences hosted in countries and regions, too numerous to list – as well as workshops at the Beijing and Firenze International Geological Congresses.

These meetings have set the agenda for geoheritage (geosite, geo(morph)ological site) protection in the last ten years and introduced the ideas of comparative geosite inventories for countries and regions, of National Geoparks (with nested, protected geosite groups), promoted the integration of geoconservation in strong national nature conservation, as well as links to landscape (Dublin 2002 conference) and geoarchaeological conservation.



From conference hall.
Photo:
<http://www.dct.uminho.pt/cct/progeo2005/>

The IV International Symposium, which received the sponsorship of the IUGS and the Portuguese Foundation for Science and Technology, and the support of the UNESCO World Heritage Centre, had an organising committee of José Brilha, Diamantino Pereira, Maria Isabel C. Alves, Mário Cachão, Miguel Ramalho, Paulo Pereira and Renato Henriques. They created, supported by a scientific committee chaired by Francesco Zarlenga and Graciete Dias, the best surroundings and atmosphere for a creative (and sometimes energetic) exchange of views, for sharing of experience and initiating collaborations: and many congratulations came from the participants.

Nationals of more than thirty countries from four continents contributed to the symposium's activity and products. Several international and national institutions were represented at the Opening Ceremony, namely: the IUGS (Prof. Antonio Brambati), the IUCN -The World Conservation Union (T. Badman), the European Federation of Geologists (Fernando Noronha), the Portuguese Nature Conservation Institute (Luis Macedo), the National Institute of Engineering, Technology and Innovation - Portuguese Geological Survey (Teresa Ponce de Leão), the National Natural History Museum (Fernando Barriga), the Portuguese Geologists Association (Fernando Noronha), the National Association of Portuguese Municipalities (Joaquim Barreto), and the School of Science of the University of Minho (João Ferreira), as well as the many national committees, national agencies, geological surveys, and

institutes, NGOs and academies of science which make up the ProGEO network.

One hundred and sixty participants presented about one hundred and fifty oral and poster contributions. These contributions were devoted to the following themes: 1) Methodologies to characterise geological heritage; 2) Management of geological heritage; 3) Integrating geoconservation in nature conservation policies; 4) Geoconservation and education for sustainable development; and 5) Portuguese frameworks of international relevance. An Abstracts Volume was published and distributed to all participants. A Proceedings Volume is under preparation.

The programme included three Plenary Lectures. Common approaches to geoconservation in Europe, and the considerable differences by W.A.P. Wimbledon (Countryside Council for Wales, UK) presented a survey of the state of the art of geoconservation in Europe (a full compilation of information on geoconservation in Europe by ProGEO is to be published in book form in 2006, with reports from 35 European countries). A general overview of Geoconservation in Portugal by J. Brilha (Earth Science Centre of the University of Minho, Portugal) gave to all participants a summary of the beginnings of geoconservation in Portugal as the host country of this Symposium and a general idea of the initiatives undergone during the last decade. This formed an exemplar of a country with young and growing structures in the geoconservation field. Finally, the lecture Geological heritage in Germany - geotopes and



Conference members on an evening excursion in the old city of Braga.
 Photo:
<http://www.dct.uminho.pt/cct/progeo2005/>

National Geoparks presented by K. Goth (Saxonian State Authority for Environment and Geology, Germany) showed the German example of how geoconservation has been included in Nature Conservation policies.

About fifty participants joined the four field trips organised to see some of the Portuguese geodiversity and also examples of Geoconservation: Field Trip A: The Meso-Cenozoic of Algarve (Southern Portugal). A raw geo-heritage diamond encrusted on a tourist orientated region (Leaders: Mário Cachão and Pedro Terrinha); Field Trip B: Geology as background for a top-class geological and cultural heritage in the Douro region (Northern Portugal) (Leaders: Diamantino Pereira, Graciete Dias, Helena Couto, Isabel C. Alves, Narciso Ferreira, Paulo Castro, Paulo Pereira); Field Trip C: Jurassic Heritage and Geoconservation in Portugal: selected sites (Leaders: Helena Henriques, Ana Azerêdo, Luis Duarte, Miguel Ramalho); and Field Trip D: The volcanoes of Azores Islands: a world-class heritage - examples from Terceira, Faial and Pico islands (Leader: José Madeira). A Guide Book has been published for each field trip and distributed to all Symposium participants.

The symposium at its final plenary was in complete agreement on all topics. It heartily endorsed efforts at improved geoconservation in Iberia, and, perhaps most importantly, all work to change curricula to incorporate appreciation of geoheritage. Much discussion went into

the three main challenges that remain: making protection truly effective in those countries where legislation already exists to identify and protect geosites (because of inactive agencies, or lack of political will, or an ineffective town and country planning system); putting geosites protection on the agenda and statute book in those countries where it is lacking or a 'poor relation'; and thirdly putting geoconservation into curricula (because it has suffered through the failure of the leaders of geological science to promote geology) and promoting it through educative and popularisation mechanisms (literature, trails, internet, geoparks). In this context, excellent examples of community and municipality initiatives had been shown during the meeting.

Additionally, and in the particular, the symposium endorsed work on the creation of National Geoparks, as a means of achieving the original UNESCO aims of the conservation and sustainable use of the key geosites within. In this connection, ProGEO was asked to take forward the coordination of communications between those creating geoparks in the countries, and this was agreed. Key conference papers (by Goth et al. and Reynard et al.) excellently laid out key steps to be followed inside the countries, if one wishes to have a coherent approach to choosing National Geoparks. Once this sustainable end is achieved, then national geoparks might be placed under the UNESCO umbrella.

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University of Minho — Braga

Final Declaration

We congratulate the organizing committee on achieving the presence of participants from more than thirty countries, from different continents, and in their promotion of the sharing of experiences and good practice, allowing us to learn from each other;

We urge, as at the last International Geoconservation Symposium, that, due to the fact that many geosites of paramount importance continue to be at risk in numerous countries, national authorities should pursue strategies in order to implement *Recommendation Rec(2004)3 on Conservation of the Geological Heritage and Areas of Special Geological Interest* of the Council of Europe;

We stress the importance of the integration of geoconservation issues in school curricula, as a contribution for the United Nations Decade of Education for Sustainable Development (2005-2014);

We endorse all local, national and wider development of Geoparks, which must be based on sound and sustainable protection of the geosite resource;

We fully endorse and support the recent developments undertaken in Portugal by the national ProGEO Group with the collaboration of other national institutions, those efforts resulting in the definition of geological frameworks of international and national relevance;

We recommend that both Portuguese and Spanish specialists should renew efforts to achieve the definition of geosite frameworks of Iberian relevance; ultimately linking this work with that in other south European countries;

We recommend the Portuguese Official Authorities, namely the Nature Conservation Institute, to urgently integrate geoconservation into national strategies. Also it is an essential requisite that this Institute increases the geological expertise of its technical staff, in order to better assure the conservation of the Portuguese geological heritage inside and outside protected areas.

University of Minho, 16 September 2005

Distribution of ProGEO NEWS

We constantly try to distribute ProGEO NEWS to the members in a cost-effective way. The new electronic distribution does in part work well, but it is a number of problems that arise.

One problem is that not all members have the possibility to download files of the appropriate size. Another practical problem is that the distribution is not as effective as anticipated. Changing e-mail addresses as well

as instabilities in e-mail distribution result in a number of non-delivered messages for each distribution

This is the reason that we now will try to send ProGEO NEWS to national contacts for local distribution by mail or if necessary as hard copies. We hope this will improve the distribution, and will if needed help national contacts with practical problems that may arise. The newsletter is sent to all paying members, but after some time it will also be available on our web site.

Reports back to the editor of the functionality of the distribution are welcomed.



Veli Suominen

1941 – 2005

By Carl Erik Johansson

Dr Veli Suominen, ProGEO founder and council member died in his home in July 2005. He was broken down by cancer that was very aggressive and fast.

Veli Suominen worked in the Geological Survey of Finland. He served for several years as an executive committee member of ProGEO. He was also an auditor for ProGEO.

Veli Suominen performed a thorough chronostratigraphic research of the Subjotnian and Postjotnian diabases in connection with rapakivi complexes in Finland. His theoretical and practical knowledge of bedrock properties was very useful, e.g., when the freshwater tunnel from Lake Päijänne to Helsinki was projected and performed. He made important contributions to the regional survey of valuable bedrock formations in Finland with regard to nature conservation.

His knowledge of rock, gravel and sand properties for construction purposes was very solid and much used in the Nordic countries. This is seen, e.g., in *Nordic Stone* (2003). Veli also took part in projects aiming at sustainable use of natural resources such as bedrock, moraine and esker formations, integrating nature con-

servation, groundwater protection and building purposes. Veli also contributed very constructively in the joint project Geodiversity in Nordic Nature Conservation and to *The Physical Geography of Fennoscandia*. He was a prop in different projects, supplying literature, references, texts, maps and photos, and granting correct manuscripts.

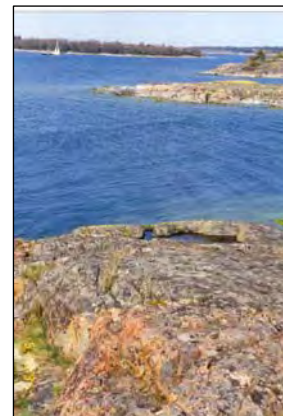
Veli Suominen was born in Raumo, was a student in 1962 and married the same year. He studied at Åbo Akademi (the Swedish university in Åbo). He was fully Finnish-speaking and had Finnish and Swedish at his finger-ends. He was always interested in nature and especially in the sea. As a boy he was a sea-scout, and together with his two brothers he made long sailing-tours in the Baltic Sea, as far as Sweden.

From 1965 he was a summer probationer at the Geological Survey of Finland (GSF) in the archipelago of Åland. He was filosofie magister 1969, filosofie licentiat 1972, filosofie doktor (Ph. D.) 1992 at University of Helsingfors where he was appointed docent 1992. He was assistant at Åbo Akademi 1968–1973 and research geologist at GSF from 1973.

His home and family, the sea and played important roles in Veli's life.

Some publications by and with Veli Suominen:

- Suominen, V. (1991), The Chronostratigraphy of Southwestern Finland with Special Reference to Postjotnian and Subjotnian Diabases. Geological Survey of Finland. Bulletin 356 (Espoo).*
- Johansson, C.E. (ed., 2000), Geodiversitet i nordisk naturvård (Geodiversity in Nordic Nature conservation). Nord 2000:8 (Copenhagen).*
- Selonen, O. and V. Suominen (eds, 2003), Nordic Stone. UNESCO/IAEG/Geological Survey of Finland, Imprimerie Corlet (Condé-sur-Noireau).*
- Frisén, R., Johansson, C.E. and V. Suominen (2005), Archipelagos of the Baltic Sea. In: Seppälä, M. (ed.), The Physical Geography of Fennoscandia. Oxford University Press (Oxford).*



The Åland archipelago.
Photo:
Carl Erik Johansson

The role of SIGEA in the protection and evaluation of geological landscape and geosites

SIGEA - Italian Society of Environmental Geology
www.sigeaweb.it - info@sigeaweb.it

Dr. Giuseppe Gisotti, SIGEA President
Arch. Maria Paola Mauri, SIGEA Secretary

SIGEA, as part of its research, dissemination and training activities, undertook during 1994-95 a national study of Italian geologic landscapes. This was a collaboration, as the Italian support body, with ProGEO with the aim to define and select geosites.

The landscape units are described as spaces with homogenous geometric configuration and characteristics repeated more or less frequently. In particular a geologic landscape is defined when certain geologic factors predominate in contrast with others.

The following main units have been listed in Italy:

- shoreline and coastal dunes;
- alluvial plains;
- clay reliefs;
- volcanic reliefs;

- limestone reliefs;
- granite landscapes;
- arenaceous-marly flysch landscapes.

The "Geosites Documentation Centre", located at the University of Genova – Architecture - Polis Department, coordinates the Italian geosites census.

In 1995 a Working Group in Sigea was established devoted to Geosites, which collaborate with the "Geosite Documentation Centre". The WG has published, in the Geologists National Council Review, a paper to identify the criteria for Geosite selection and conservation and, has, in close cooperation with ProGEO, completed the following projects:

- Census of the main geosites in Matera Province, for the Provincial Administration, with the identification and analysis of 30 geosites.
- Organization in Rome of the 1° Technical-scientific course in Italy on Geosites.
- design of the 1st geologic-historical path in the Aeolian Islands, Ginostra-Stromboli, with 8 stops at the most relevant geosites and with the possibility of underwater return.
- No. 2/2002 of the SIGEA review – "Geology of Environment" – dedicated to "The Geosites. Conservation of the Geologic Heritage".
- Census of the main geosites of the Province of Venice, for the Provincial Administration;
- Other activities include the design and promotion of 10 geologic paths located in a number of Italian regions, from Friuli Venice Julia to Sicily - with Polis Department of Genova University – projects funded by MIUR (Ministry of Instruction, University and Research).

SIGEA, collaborating with several Italian Scientific Institutions and ProGEO organized the II° International Symposium on the Conservation of Geological Heritage/World Heritage in Rome, 1996, as an International Congress on Geologic Protection: Geotope conservation world-wide, European and Italian experiences. "Descriptive Memories of the Italian Geologic Map", vol. LIV. Prime Minister's Office - Geologic Service - Rome. In this Congress evidence was presented of the role of geosites as emergent elements of geologic landscapes.

Dr. Francesco Zarlenga and Prof. Gerardo Brancucci, both members of SIGEA Executive Committee, are President and member of the ProGEO Executive Committee respectively.

Circular for a SIGEA conference on urban geology, November 2005: http://www.sigeaweb.it/t_corsi_05/geolq_urbana.pdf



CONVEGNO
Geologia Urbana nella capitale
viaggio nella IV^ dimensione

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 FIDAF Federazione Italiana Dottori in Agraria e Forestali
 ALGI Associazione Laboratori Geologici Italiani

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PRIMA PARTE - Risorse e rischi geologici a Roma
 Moderatori Giulio Pizzagalli e Fabio Garbin

- 1 - Quadro urbanistico cittadino
 Vittoria Calzolari, Università degli Studi "La Sapienza", Roma
- 2 - Urbanistica e Geologia
 Pietro A. De Paolis, Presidente Consiglio Nazionale dei Geologi
- 3 - I terreni di Roma sotto l'aspetto della geologia tecnica
 Giuseppe Cavarretta, Direttore CNR-Istituto di Geologia Ambientale e Geoingegneria
- 4 - Idrogeologia di Roma
 Giuseppe Capelli, Università degli Studi di Roma III
- 5 - La cavità sotterranea
 Angelo Corazza, Dipartimento Protezione Civile
- 6 - La risposta sismica dei terreni di Roma
 Calvino Gasparini - Istituto Nazionale Geofisica e Vulcanologia

PAUSA PRANZO

SECONDA PARTE - Le opere e le loro interferenze con l'ambiente geologico
 Moderatori Giulio Pizzagalli e Fabio Garbin

- 1 - Innovazione tecnologica della Soles-Forlì nelle opere di fondazione in ambiente urbano
 Francesco Alberti - Membro Consiglio di Presidenza A.G.I.
- 2 - La nuova linea della metropolitana B1
 Andrea Scozzi, Direttore dei Lavori Linea B1, Romametropolitane Srl
- 3 - I parcheggi sotterranei
 Arfonio Maria Michetti - Università degli Studi "La Sapienza", Roma
- 4 - Il fascicolo del Fabbricato
 Daniela Marzino - Ordine degli Architetti di Roma
- 5 - La IV dimensione: Possibilità nella capitale
 Alessandro Focaracci - Ministero della Infrastruttura

Italo Insolera illustra con diapositive: "Alle origini della geologia: i disegni a gli acquedotti di De Saussure e Goethe, viaggio in Italia"

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Albanian Geotrip, September 2005

UPPER KURVELESHI PLATEAU: "A NATURAL KARST AND EROSION MUSEUM"

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This geotrip was organized according to the ProGEO Program, included since 1995, by Gerard Gonggrijp in his first European Project on Geological sites. Every year thereafter in September all European countries recommended to arrange ProGEO-Trips.

This geotrip was arranged by ProGEO-Albania 9th-10th September, to one of the most known karst regions of Albania: Kurveleshi Carbonate Highland. The trip was partly supported by the Mining & Processing Technology Institute (MPTI). 22 persons participated in the trip including geologists, geographers, mining engineers and economists.

Included in the program was a visit to the ancient city of Gjirokastra, proclaimed as World Cultural Heritage under UNESCO protection. The city is built on the eastern slope of Mali Gjere ("The Wide Mountain") and is the biggest city in southern Albania. It is mentioned as an inhabited center in the IV century when it passed from Byzantine rule into the hands of Zenebishts, an Albanian feudal princely family. In the XVII century the city had grown to 2000 houses and was spread outside the walls of the castle. Both buildings and streets are made of the same stones: white limestone with blue and pinkish shade and black sandstone.

Gjirokastra was well established by the XIII century, but the arrival of the Turks in 1417 brought a decline. By the XVIII century Gjirokastra was thriving again with a flourishing bazaar. Today all buildings must be con-



*One of the canyons of Gurra complex.
 (Photo: A. SERJANI)*

structed conform to a historical preservation plan.

Gjirokastra is a city of museums: The Museum of Renaissance, Museum of the National Liberation War and National Museum of Weapons, which has been set up in the castle. Here are "Eqerem Çabej" University, many schools, churches and mosques.

The following geosites was visited:

- Kavaja Rock, Visoka Bituminous sandstone, Greshica Transgression, and Memaliaj Stratigraphic section of molasses with Coal beds north of Vjosa River slope.
- Phosphorite Horizon in "Rrypa e Kuqe" outcrop, where this horizon was discovered for the first time in Albania by geological expedition led by Prof. Zihni SINOIMERI.
- Carbonate-siliceous Mesozoic rocks, on both slopes of Bença River with a lot of foldings.



Partial view of Kurveleshi karst Plateau. (Photo: A. SERJANI)



One of the waterfalls of Gurra Canyon. (Photo: A. SERJANI)

- Skarani break in sedimentation “Hard Ground” type between massive limestone of the Lower-Middle Liass and upper siliceous pack (USP) of Kimmeridgian, karst caves on surface of the massive limestone and water spring in Luzat-Bença-Vermik regional fault.

In the Kurveleshi Highland there are formed many karst caves and three main karst fields can be defined:

- The Golem-Pusi Mountain karst field (100 – 1500 m a.s.l.) is about 2km wide and 3.5 - 4.0km long. It is a the typical karst fields with peneplanation view.
- The Lekdush-Progonat-Shteppez-Picar Mountain karst field is one of the biggest karst field in Albania. It represents the upper karst level of the Kurveleshi Plateau, at 1300-1600m above the sea level. It is large and has a diversity of karst forms such as long regular valleys and blind valleys.

- The Griba glacial-karst field is located between Kendrevica Mountain (2122.1m) and Lopsi peak (1837.0m). It is a glacial-karst field almost of isometric form and about 3km long and 2.5km wide. On the surface there are formed a lot of karst holes, blind valleys, wells and remains of moraines, cirques are also found.



Participants in ProGEO-Albania 2005 Trip. (Photo: A. SERJANI)

Deadline for the next issue of ProGEO NEWS: 15.12.2005

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