ProGEO NEWS

No. 4 1997

The photo on the front page by Rolf Löfgren, shows a part of the Rogen Nature reserve in Central Sweden, adjacent to Femundmarka National park in Norway. This is the type site of the famous Rogen moraine, one of the ribbed moraine types surveyed by Hättemark.

ProGEO **NORDIC NEWS**

Denmark: Conference on Geosites

The Danish Geological Society, The Royal Danish Geographic Society and the Forest and Nature Board arranged a discussion meeting on Geosites - Danish geological and geomorphological localities of international value - in September. The conference took place at University of Odense and resulted in well-structured descriptions of Geosite candidates.

Steen Andersen's introduction presented criteria for selection of Geosites, the selection of Danish Geosites, and the continued work. The descriptions of sites related to a well-structured framework and the discussions followed the headlines: The stratigraphy of Bornholm; Cretaceous - Danien stratigraphy; Tertiary stratigraphy; Quaternary stratigraphy; Fossils; Late- and Postglacial stratigraphy and Climate history; Quaternary deposits; Tectonics, including glacial tectonics; Landscapes; The Sea bottom.

The meeting showed Denmark's 'best geology and

geomorphology'. It can be perceived as an important step of national contribution to the European network of Geosites. The Danish model is a constructive one, not least regarding cooperation between scientists, nature conservationists, and administrators. A comprehensive report of the conference can be ordered from Steen Andersen, Skov- og Naturstyrelsen, Haraldsgade 53, DK 2100 Copenhagen.

Finland

Gabor Gaál is the new Research director of the Finnish Geological Survey. He worked previosly in the survey and cooperated, e.g. with Roland Gorbatschev of Sweden, in surveys of the Baltic shield. Now he has returned from Hungary where we had the pleasure to meet him and his colleagues at the start of ProGEO '94.

Sweden

Ribbed moraines and Fennoscandian Palaeoglaciology

A very interesting thesis on moraines and Fennoscandian palaeoglaciology was presented and defended by Claes Hättestrand at the Department of Physical Geography, Stockholm University, in November 1997. It consists of summary and four papers:
Ribbed moraines in Sweden - distribution pattern and palaeoglacial implications,
Ribbed moraine formation (together with Johan Kleman),
Fennoscandian palaeoglaciology reconstructed using a glacial geological inversion model (together with Kleman, I. Borgström and A. Stroeven),
The glacial geomorphology of central and northern Sweden.

The fourth paper is published as a Research Paper, SGU Series Ca 85 by the Geological Survey of Sweden.

The thesis combines good surveys presented as very well made maps and consistent descriptions, and interesting theories, for example on the formation of ribbed moraine by basal fracturing of an ice-sheet. It also shows the regional distribution of different types of moraine forms. It is an excellent contribution to the understanding of moraine formations characteristic of middle and northern Fennoscandia. It also supports the Geosite framework of Fennoscandia.

Reference

Hättestrand, C. 1997: Ribbed moraines and Fennoscandian Palaeoglaciology.
The Department of Physical Geography, Stockholm University, Dissertation No. 9.

The Laponian Area in Sweden

The Nordic countries now have their first combined natural-cultural World Heritage Site: The Laponian Area. It has an area of more than 9 000 km2 comprising the national parks Padjelanta, Sarek, Stora Sjöfallet and Muddus, and the nature reserves Sjaunja and Stubba conserved according to the Nature Conservation Act, and some areas protected according to the Natural Resources Act: the Sulitelma Massif, the Tjuolta valley and the Rapa valley.

Now the area is presented in English: The Laponian Area. A Swedish World Heritage Site by Rolf Löfgren (Project Leader), Claes Grundsten (texts and most photos) and Hans Sjögren (map illustrations)

The Laponian Area. A Swedish World Heritage Site can be ordered by Kundtjänst, Naturvårdsverket, S-106 48 Stockholm, e-mail kundtjanst@environ.se, fax +46 8 46 698 1515. Internet site: http:www.environ.se.

Carl-Erik Johansson

The photo by Rune Frisén shows palsas (peat mounds expanded by frozen water) in the large mire complex Sjaunja and a nappe front to the west.

New litterature

Protected landforms in Sweden by Ingela Gull is now published in cooperation between the Swedish Environmental Protection Agency and the Department of Physical Geography, Stockholm University. It is a first step to give an account of the protection situation of landforms with geoscientific conservation values. It focuses on nature reserves and nature conservation areas. It has a brief summary in English showing for example cover and gaps of protection.

Gull, I. 1997: Skyddade terrängformer i Sverige (Protected landforms in Sweden). Naturvårdsverket Rapport 4817. 230 pp.

Other new papers within geoconservation:

Lapo, A.V., Davydnov, V.I., Pashkevich, N.G., Petrov, V.V. & Vdovets, M.S. 1997. Geological Objects of Global Significance in European Russia. Stratigraphy and Geological Correlation, Vol.5, No. 3: 290-298.

Schlüchter, C. 1997. Vom menschlichen Eingriff zum Geotop? Zbl. Geol. Paläont. Teil1 1995 H. 7/8: 787-792.

The photo here by Carl Erik Johansson shows glacially sculptured granitoidbedrock in Bullerö Nature reserve, Stockholm Archipelago. Bullerö is plannedto be part of a new National park in the National park plan for Sweden.(Swedish Environmental Protection Agency). The Stockholm Archipelagois proposed as a World Heritage Site in the Nordic report Verdensarv i Norden (Nordic Council of Ministers, Tema Nord 1996:39).

ProGEO '97 in Estonia

I have read the expressions of opinions concerning ProGEO '97 in Estonia. It was very pleasant for me and my colleagues from different Estonian geological institutions.

During the organizing process I felt serious support and aid from all the members of the Organizing Committee: Juri Kask (Geological Survey of Estonia), Avo Miidel (Institute of Geology), Enn Pirrus (Tallinn Technical University), Juho Kirs (Tartu University) and Tiit Randla (Ministry of the Environment). Juri Kask was the person who said at the beginning: we must do it, it is important. Unfortunately he couldn't participate in the meeting being at the marine expedition.

In addition I had some other good advisers in Estonia and from abroad. Rein Ratas, Allan Gromov and Guido Paalme from our Ministry of the Environment were always ready to help the Organizing Committee. My colleagues from Geological Survey of Estonia Maire Sakson, Saima Peetermann and Maie P{rnam{e sent and received most letters, faxes and E-mail messages. Certainly, we had numerous difficulties. Rich experience of ProGEO friends Carl Erik Johansson, ProGEO 's former President, and Veli Suominen, Lars Karis and Jonas Satkunas enabled to solve many problems and questions.

One of the most serious problems was financing. Good advice of Carl Erik and obligingness of Swedish Environmental Protection Agency guaranteed successful solution of that basic problem. There were also difficulties with obtaining the visas for participants from Southeastern Europe, some of which were finally solved at the Tallinn Airport …

Unpleasant surprises continued also during the scientific conference at Vosu (Lahemaa National Park). Anyway, the conference, elections and excursions were carried out. It was really hard work performed by international team.

I hope ProGEO '97 promoted conveying the international know-how of wise use of geological resources, with special regard to the protection of European Geological Heritage. The meeting had also the importance for understanding how landscape and biodiversity depend on geodiversity. There were also other results:

- promotion of geotourism in Europe;
- distribution on Nordic ideas of nature types and regional division;
- propaganda for the Nordic model of co-operation, which is much appreciated in Europe.

ProGEO '97 has a particular importance for Estonia. During the annual meeting and excursions Estonian scientists had a good possibility to exchange information and experience with researchers from other European countries. We had also a chance to demonstrate to our colleagues Estonian geosites, as well as the results and trends of Estonian nature protection and conservation.

The next task for the Organizing Committee is to publish the Proceedings and to arrange the information seminars.

The Organizing Committee expresses its great gratitude to Swedish Environmental Protection Agency, to Ministry of the Environment of Estonia and to Estonian Environmental Fund for financial support. We also wish to thank the colleagues from Nordic, Baltic and other countries for their useful advice.

Rein Raudsep
Chairman of ProGEO ' 97 Organizing Committee

Project on teachers training on geoconservation

In the framework of the European Project Comenius, action 3.1, a proposal, named GRECEL has been approved by the European Commission. The project concerns the preparation of a plan, on a European level, for training environmental teachers in geological heritage and geoconservation. The first year of the project will be dedicated in establishing a dynamic network of collaboration between the partners of the project, as well as, the monitoring of the state of art in geoconservation education, in each one of the participant countries and production of a relevant educational material. The aim of the project is to prepare an innovative common proposal on the methodology of training teachers in geoconservation. In that way they will become multiplicators of the geoconservation ideals and practices. Without a trained and professional staff, the geoconservation values will stay out of the schools' curricula and the environmental study will not be as integrated as it could and should be.

To have an integrated and complete approach of the matter, our partners (14 in number) are specialists from different European countries (The United Kingdom, The Netherlands, France, Slovenia) and from various institutions (Unesco, Ministry of Environment, Universities, Institutes, National Parks). All of them are ProGeo members or friends.

For the first year of our project two meetings are foreseen, the first in Greece in December 1997, the second, in France next spring. In between these two meetings, there are smaller gathering two or three persons for partial work. A third meeting, in the United Kingdom, is foreseen the second year of the project. The funds for the first year are 20.000 ECU, not enough of course, but this project is a good base for other supplementary, bigger projects.

Irene Theodossiou-Drandaki

News from Slovenia

Geotopes interconnected with cultural and historical monuments

It is not rare for the geotopes to appear in connection with other items of value, particularly those of cultural and historical background which, by no means entails, a rather multilayered safeguarding. Usually one item of curiosity necessitates the safeguarding of others sharing the same site.

A picturesque example of such a complex entity is the partisan hospital Franja near a small urban area of Cerkno, in western Slovenia. The hospital, named after the woman doctor Franja Bidovec, was in operation ever since the end of the year 1943 and up to the end of the second world war. 500 wounded persons were taken care of in this hospital which was rather well equipped at the time, having an x-ray apparatus as well as other instruments necessary to perform even more demanding surgeries. Moreover, it possessed its own power station. That is why, the Franja hospital is today regarded as a unique humane and historical monument, a well preserved and carefully maintained open-air museum protected by legal acts, the geologic and geomorphologic curiosities of the site do, subsequently, enjoy the same legal protection.

The Franja hospital was hidden in a deep ravine, called Pasica. Due to a difficult access, abrupt or even precipitous slopes it was never discovered by the enemy. As a geotope, the gorge itself is very interesting. At the gorge entrance there is a small cascade rushing down a rocky threshold. The falling water has made interesting erosive canals as well as kettleshaped hollows. In the upper part, the gore narrows considerably and there, in the rocky wall, is a small karstic cave, where the patients of the hospital were transported in case of danger. The slopes of the two banks from the Middle Triassic dolomite are corroded and collapsing. The brittle rocks

could be dangerous, that is why the mountaineers have to clean the slopes to make the access to this monument safer for the visitors. Some years ago, a great landslip totally filled up the entrance part of the gorge. All the material was carried away, the gorge was cleaned and the original state was restored.

The case of the Franja hospital poses an interesting problem. Namely, hadn't it been recognized as an important historical monument, the ravine would have been evidences as a natural curiosity, yet, most probably it would not have been listed as a valuable geotope, or, at least would not be known to larger public, due to its difficult access. The historical monument has drawn the attention to the natural places of interest as well, the deep and narrow gorge with all its tiny geological and geomorphological phenomena. At the same time, an appropriate visit to the Franja hospital dictated the arrangement of the access to the ravine.

Rajko Pavlovec

ProGEO **Central Europe Working Group**

Successful workshop of Geosites candidate list in Central Europe

In October 1997 ProGEO Working group 2 had a workshop of draft candidate list of Geosites representative of Central Europe in Krakow. It was very well arranged by Polish Institute of Nature Conservation PAS and Polish Geological Institute.

Zofia Alexandrowicz was chairman, Janina Oteska-Budzyn and Jan Urban secretaries. The workshop was supported by National Foundation of Environment Protection in Poland and Salt Mine Wieliczka. Some 40 persons took part in the workshop. It was very successful, as well as the excursions.

Todor Todorov and Carl Erik Johansson presented ProGEO and could welcome new members. In the first workshop session Programmes of geoconservation Bill Wimbledon informed on Geosites - an international geoconservation initiative. Professor Stefan Koslowski, Polish Geological Institute, informed of the Geodiversity conservation programme in Poland. The institute has a contract with the National Fund of Environmental Protection to realise the issue Study of Geodiversity System in Poland to be carried out 1996- 1999. Principles and methods of geodiversity conservation, foundations of domestic network of geoconservation, proposals of the Polish sites which should be introduced in the European list of the geological heritage are to be elaborated. Popular-scientific leaflets concerning the inanimate conservation of the Holy Cross Mountains, the Carpathians and the Sudety Mountains will be prepared.

Important geosites in the Ukrainian, Polish and Slovakian Carpathians, in the Central Slovakia neogene volcanic field and an extreme example of post-cretaceous tectonism, Suché Skály in Bohemia were presented in the second session. The third session showed geosites of the Sudety

Mountains, the fourth session geosites of the Middle European Uplands.
The fifth session contained presentations of geosites in the middle European Lowland: a preliminary list of the quaternary geosites in the Northern and Central Poland; the most valuable sites of Belorussia, and representative geosites in Lithuania.

There was also a show of Geotopes in the Central-European landscapes of Austria.

A ProGEO meeting was held in the new meeting room of the Institute of Nature Conservation of the Polish Academy of Sciences. Director Zygmunt Denisiuk presented the institute. The meeting that was chaired by Bill Wimbledon dealt with the state of geosites inventories, databases of geosites, evaluation and selection of geosites, the schedule of regional meetings and the workshop proceedings.

We could conclude that the workshop showed the most interesting geology in Central Europe. The ProGEO Working Group 2 proceeds very well.

The first excursion gave the opportunity to see the Bonarka geological reserve near Krakow with an outcrop showing the Cretaceous abrasive surface in faulted Jurassic limestones, and to experience fascinating underground geology the salt mine Wieliczka and the Crystal Caves Geological reserve and documentary sites of Miocene saliferous formation of Middle Badenian, with a long tourist route and museum. Jan Urban showed how the slight weathering of the big salt crystals can be used for monitoring underground air moisture.

The second excursion brought us to the uplands south of Cracow where we saw and discussed 7 sites: the inanimate nature monument Trojanowice with upper Jurassic limestones truncated by an abrasive surface and a sequence of Turonian limestones; Ojców National Park museum of natural history and educational centre, and imposing geological-geomorphological features typical of karst valleys in Upper Jurassic limestones; Pieskowa Skala renaissance castle on the rim of a limestone rock; Jerzmanowice - a central part of the Jurassic Landscape Park area showing the structural relief of the Cracow Upland; a quarry at Zabierzów proposed as a documentary site of inanimate nature revealing Jurassic limestones, Crataceous deposits, abrasive surfaces, karst phenomena and tectonics; the Skala Kmity nature reserve at Zabierzów showing a geological cross-section in the gap of the Rudawa river.

The excursions were excellently guided by Zofia Alexandrowicz, Janina Oteska-Budzyn and Jan Urban (Inst. Of Nature Cons., Pol. Acad. of Sciences), K. Brudnik, J. Przybylo and J. Stecka (Wieliczka Salt mine), Stefan Alexandrowicz and I. Felisiak (Acad. of Mining and Metallurgy), and A. Biderman, J. Patyrka and B. Wi´sniowski (Ojców National Park). The geosites were also presented with well-made leaflets, papers, guidebooks and video films.

ProGEO GEOSITE OF THE YEAR

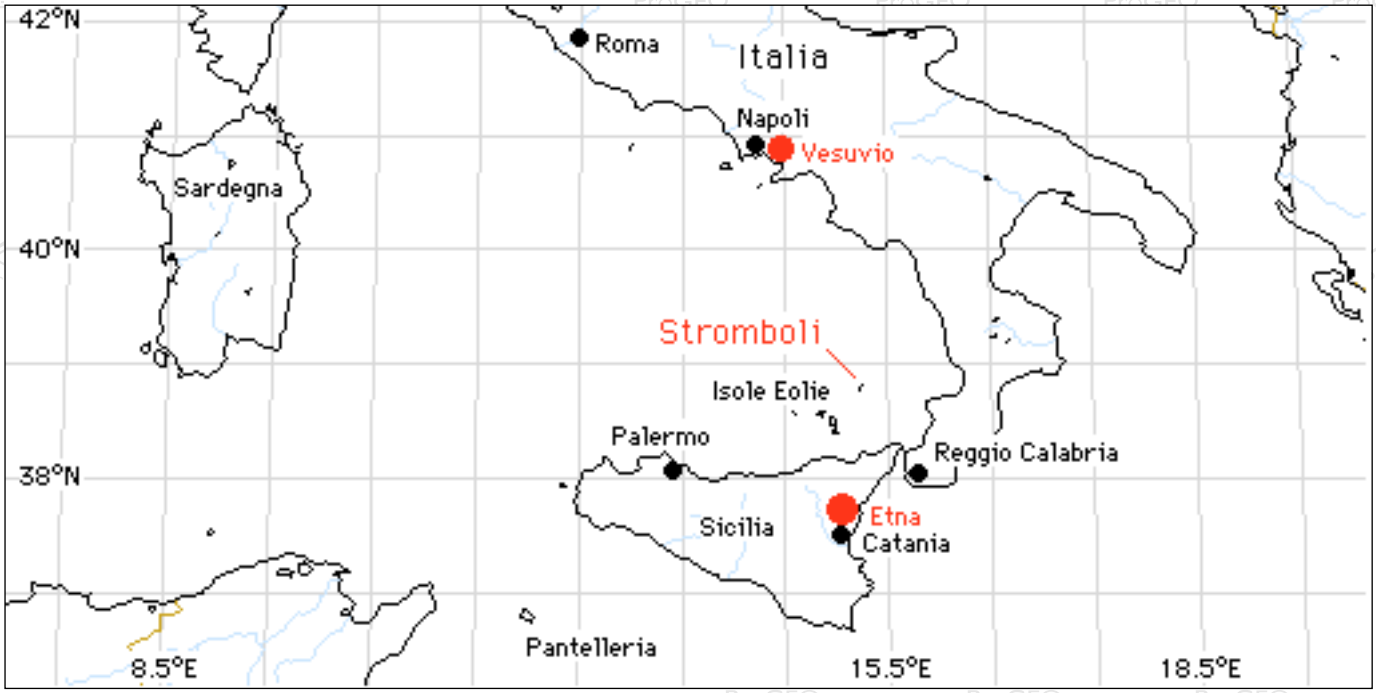

Fig.1 *- Map of Southern Italy*

STROMBOLI

Abstract: Stromboli is the northernmost of the Aeolian Islands (Italy) and is an active stratovolcano worldwide known for its typical «strombolian»activity. Stromboli volcano is considered an extremely important field laboratory for many problems of volcanology and related subjects in the Earth Sciences. Moreover Stromboli has one of the best preserved natural environments among the Mediterranean islands.

Geology

Stromboli is the northernmost island of the Aeolian island arc and has a surface area of 12.2 kmq. As all other Aeolian islands it is entirely volcanic and, together with Etna and Vesuvio, is one of the very few presently active volcanoes in Europe.

With an elevation of 924 m a.s.l. Stromboli forms a steep and uniform volcanic cone which rises from a depth of about 2000 m in the Tyrrhenian Sea. There are two small settlements on this rocky and steep island: Stromboli in the Northeast and the tiny village of Ginostra in the Southwest.

Stromboli has attracted geologists and volcanologists since early times due to its persistent «strombolian» activity and today is considered an extremely important field laboratory for many problems of volcanology and related subjects in the Earth Sciences. National and international researches regard volcanological and magmatological evolution, detailed geophysical

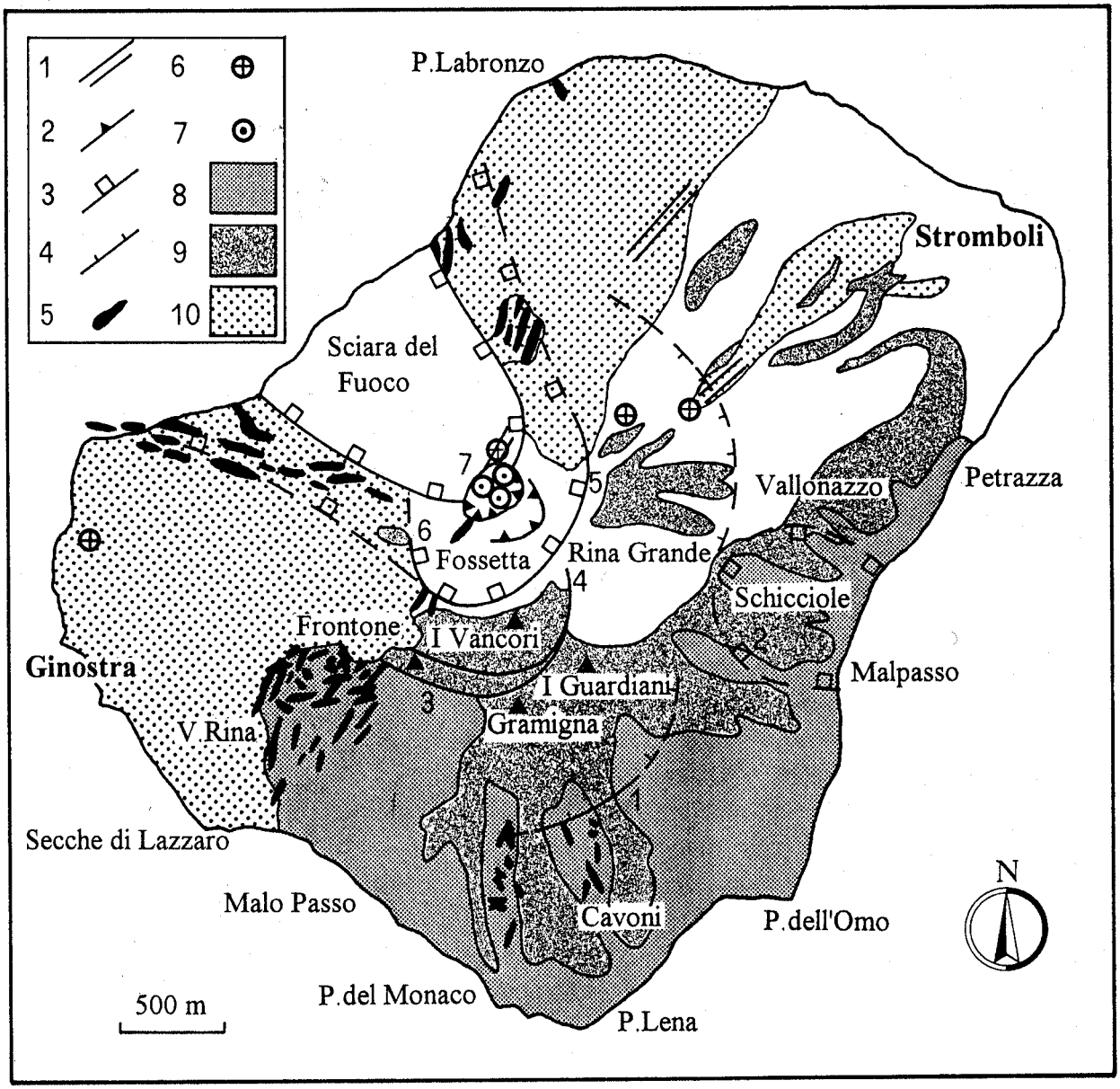

Fig.2 *- Simplified geological map of Stromboli. 1, eruptive fissure; 2, crater rim; 3, flank and sector collapses; 4, summit caldera; 5, dike; 6, young parasitic vent; 7, active vent; 8, oldest rock units comprising Paleostromboli I, II e III; 9, Vancori series; 10, Neostromboli rocks; in white are the Recent Period deposits (from Pasquarè et alii, 1993).*

monitoring, marine geology, coastal geomorphology, volcanic hazard assessment, environmental geology.

The geologic evolution of Stromboli volcano is recorded in its subaerial part for a time span from about 100.000 years B.P. to the present activity from the three crater vents. Four major periods (Paleostromboli, Vancori cicles, Neostromboli, Recent Stromboli) have been recognized and further subdivided in 30 volcanostratigraphic units.

Pyroclastites (ignimbrites, surge and lahar deposits) predominate over lavas (latites) during the first two periods, while the more recent products are generally basalts, with shoshonitic composition.

The interesting islet of Strombolicchio, along the NE Stromboli coast, is a neck related to a pre-Stromboli volcanic center formed about 200.000 years B.P.

The geotope Stromboli

Stromboli is a very important European geotope because it is:
- one of the rare active volcanoes in Southern Europe;
- the only volcano in Europe which forms an entire island;
- the worldwide model for the «strombolian» volcanic activity;
- a small island with many geological/volcanological features;
- one of the best preserved natural environments among the Mediterranean islands.

Moreover:
- volcanism is a fundamental stone of the Italian geological heritage;
- an active volcano in the middle of the sea has a particular and very appreciated scenic beauty;
- protection is at present provided by national and regional laws;
- in Lipari, the major Aeolian islands, there is an important Archeological-Volcanological Museum;
- SIGEA (Soc. Ital. di Geologia Ambientale) is promoting the first «geological path» of the Aeolian islands along the Ginostra coast.

The first «geological path» of the Aeolian islands deserves attention because of particular geological

Fig.3 - Stromboli view from South: Ginostra village on the left, Secche di Lazzaro locality on the right.

features: Stromboli stratovolcano evolution; pahoehoe basaltic lavas; latitic dikes; ignimbritic deposits; high energy coastal erosion; erosional features; underwater arches carved in pyroclastic rocks; volcanic hazard; high negative impact of an harbour and a road project near Secche di Lazzaro, 1.5 km east of Ginostra.

Concerning the volcanic hazard, Stromboli is at present characterized by a peculiar state of permanent activity consisting of mild intermittent explosions and continuous gas steaming. The quiete character of the normal activity is broken from time to time by eruptive crises either represented by lava emission or by more violent explosions. Major explosions, with fallout of large blocks and incandescent bombs up to about 1.5 km from craters, present average occurrence of 2.1 events per year. More violent paroxisms, with a larger volume of ejected material and a broader spectrum of phenomena, have an occurrence of one event every 10-15 years.

In 1988 a project was established to build a commercial harbour with a road on the Island of Stromboli. The project will seriously affect the environment and important geotopes on the island. Although the project is justified by the need to evacuate the local residents (about 30) and the summer tourists (about 300 to 500) in case of serious volcanic threat or of a repeated major fire, alternatives do exists and much efforts is now put into opposition to these plans.

Stromboli is a unique active volcano, with a well-preserved natural environment; it is considered a very important geosite and is now proposed for the UNESCO World Heritage List.

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International field excursion
to
The Easternmost Municipality of the European Union
in Ilomantsi, Eastern Finland from 7th to 12th june 1998

Topic:
Regional Landscape Ecological Planning and GIS related to landscapes of old Archaean shield areas
Preliminary program:

Sun june 7th
8.00 - Arrival at the Joensuu Airport or Railway Station
8.00 Registration and accommodation at Hotel Julie, 6 km N of the city center
13.00 Lunch
14.00 Opening addresses: Major of Joensuu and Chair of FIN-IALE
14.30 «IALE-GIS Contact Group: Functions & Future», Dr. Dick van der Zee, ITC, Netherlands, International Institute for Aerospace Surveys and Earth Sciences, Chair of IALE-GIS cg
15.00 Discussion
15.15 «Landscape Ecological Planning in Finland and Northern Karelia» Dr. Osmo Kontturi, Chair of FALE and MD of MEKS Ky, Landscape Ecological Planning l.p.
15.45 Discussion
16.00 Coffee break
16.30 Landscape Ecological Planning in Hungary, LA Kriztina Kincses, etc.
18.30 Short walk on esker and gravel pit landscapes of Utranharju formation
19.30 Sauna or Leisure
21.00 Supé and welcoming party organized by the organizing committee

june 8th
9.30 «EIA, Remote Sensing and GIS in Regional Planning» Dr. Mikko Punkari, Project Director, Natural Resources and Environment / HUKS - Helsinki University Knowledge Services Ltd.
10.00 Discussion
10.30 Visiting to Town Council of Joensuu; «Technical Planning and GIS in Joensuu»
12.00 Lunch
13.00 Short City Tour by walking and by bus in the center of Joensuu
15.00 Visiting to EFI, European Forest Institute and Faculty of Forestry of University of Joensuu and Research Station of Forestry of Joensuu «Foresty Planning and GIS in Northern Karelia»
17.00 Coffee break
17.30 Excursion to Garden of Linnunlahti, Botanical Garden of Joensuu University and Arboretum of Joensuu
19.30 Sauna at shore of Pyhäselkä Lake and dinner at Vainonniemi Villa hosted by town council of Joensuu
22.30 Joensuu by Night

june 9th
9.00 «Planning of Forests and Peatlands using Remote Sensing» Forest Engineer Pekka Surakka, Forest Masters of Northern Carelia
10.00 Discussion
11.00 Field excursion: «Planning of Esker, Mire and Forest Landscapes». Guided by Dr. Osmo Kontturi, Dr. Mikko Punkari and FE Pekka Surakka. Route: Joensuu-Lehmo- Jaamankangas-Eno-Uimaharju-Kivilahti-Patvinsuo-Lahnasuo-Suomunjärvi-Kivilahti-Hiiskoski-Selkäkangas-Kurenharju-Lylyvaara-Sonkaja-Ilomantsi
20.00 Accommodation at the Farm Anssilanvaara, Ilomantsi (Mononen)
21.00 Sauna and Supé

june 10th
9.30 «GIS and EIA in Landscape Planning of Peat Production Area of Puohtiinsuo Bog in Ilomantsi» Consultant Sauvo Henttonen, Environmental Planning Henttonen
10.15 Discussion
10.30 Visiting the panorama tower of Ilomantsi
11.00 Field excursion: Planning of Peat Production and Shore Areas in Ilomantsi. Guided by Sauvo Henttonen and Pekka Surakka. Route: Ilomantsi village, Puohtiinsuo-Lehtovaara-Hattuvaara (Orthodoxian Chapel and Fighter's house)-Virmajärvi lake (easternmost point of EU)-Koivusuobog-Pampalo gold mine-Välivaara-Mekrijärvi Research station-Sissola farm museum -Ilomantsi
19.00 Visit to Orthodoxian and Lutheran Churches of Ilomantsi
20.00 Visit to Wine Farm and Supé hosted by Ilomantsi municipality

june 11th
9.30 Field excursion: Natura 2000 Program and Biosphere Area in Ilomantsi. Guided by Sauvo Henttonen and municipal director Jarmo Muiniekka. Route: Ilomantsi Havukkakallio archaeological site-Petkeljärvi national Park- Oinassalmi war monument-Möhkö Iron Works Museum and Rapids-Ruuhkaranta Esker conservation area and camping site and Fish Farming)-Parppeinvaara outdoor museum and Winter War Museum (General Raappana's Cabin)
19.00 Dinner

june 12th
9.30 Summary of Excursion and Closing Session
10.30 Departure to Joensuu via Kovero and Heinävaara village landscapes and Selkie landscape.
13.00 Shopping / departure from Joensuu Airport or Railway Station

Organizing bodies:
IALE-GIS Contact group and FinIALE Ry, Finnish Association for Landscape Ecology r.a.

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Acknowledgement

The editor wants to thank all contributors to ProGEO news for their efforts in producing 4 issues of the Newsletter in 1997. I really do hope that all ProGEO members go together and will do the same also next year. I will also thank my employee Norwegian Institute for Nature Research who has made my work as editor possible. This year we have had no external funding for the newsletter, which has made quite a lot of problems. We do hope for the best for the new year. If anyone know of possible sources for funding, pleas let the editor know!

To all readers of ProGEO NEWS I will express the best wishes for the year to come. May it be a peaceful year with progress in our work! Pleace send contributions to the editor as you have done in 1997 and the newsletter hopefully will be secured for yet another year.

Lars Erikstad

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Deadline for contributions to next issue of ProGEO NEWS: **01.03. 1998**

Pro Geo: European Association for the Conservation of the Geological Heritage. **Bank-account: Deutsche Bank Hamburg** -bank code number: 200 700 00, account number: 63 14 918 **Membership subscription:** 30 DM/yr.
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ProGEO NEWS

A PRIORITAIRE PAR AVION

NINA•NIKU
STIFTELSEN FOR NATURFORSKNING
OG KULTURMINNEFORSKNING