16th Workshop

UNDER THE PATRONAGE OF:

REGIONE LAZIO RIS. NAT."LAGO FIBRENO"

EXCURSION TO LAKE FIBRENO NATURE RESERVE

On motorway A24 (Rome – Pescara) to Avezzano – Sora – Posta Fibreno: Mediterranean scenic formations; vegetation of the karstic lake, walkoak in Valle Roveto and Avezzano (Conca del Fucino) return on motorway A1 (elevation 0-700 m, boots may be useful).

Lake Fibreno (300 m a.s.l.) is a spring lake located in Central Italy, in Lazio district, at the foothill of the Marsica mountain range (western portion of the National Park of Abruzzo, Lazio and Molise), finding its recharge area in the karstic environment of carbonate apennines.

In Fibreno catchement sinkhole formation is a common phenomenon because of the presence of thick carbonate deposits that are susceptible to dissolution due to circulating ground water.

The lake takes its origin from a complex of submerged and surface karstic springs of mineral-rich water, with a mean annual discharge of 10 $m^3 \cdot s^{-1}$. The lake has only one outlet: the homonymous river.

Water temperature at the spring is around 10 °C, without significant seasonal variations. The average depth of the lake is around 2 meters, except in the submerged natural depressions (*doline*) "Le Codigliane" (15 meters) and "La Rota" (10 meters, where the Floating Island is located).

Despite of the name, the constant flowing and the low temperature during all the year produce in Lake Fibreno characteristics more similar to a river habitat than to a lacustrine one.

The sublacual karstic springs along the eastern shore of the lake provide different sedimentation rates at the opposite shores, shaping a flat coast line at W and a steep one at E, where sedimentation is prevented.

This topographical heterogeneity has produced a very diverse vegetation mosaic and a recruitment of a rich local flora.

Lake Fibreno is a site where some outstanding anomalies for the flora and vegetation of the wetlands of peninsular Italy are concentrated. Here the probably extant southernmost Italian populations of *Sphagnum palustre* occur, along with the southernmost largest lacustrine stands of *Carex paniculata*. The former are restricted on the surface of the Floating Island, a cup-formed core of *Sphagnum* peat and helophyta rhizomes, erratically floating on the water-body of a submerged doline, annex to the easternmost edge of the lake. The latter are impressive palisades of 1-1,5 m high tussocks all around the Island and along the S and SE shores of the lake.

Geological evidences point out the existence in the area of a large lacustrine basin since Late Pleistocene. At that time, surface runoff dragged down in this plain a large quantity of debris coming from weathering of the surrounding reliefs. Flooded sediments were settled out afterwards in a succession of sedimentary series. With the end of the fluvial cycle, debris built up a natural levee that caused the formation of a large lacustrine basin in the area actually occupied by Sora and Fibreno Plains.

The progressive filling of the lake caused by changing in climatic conditions and neotectonic events, brought about the formation of peat deposits in the area, following different depositional cycles in a swampy environment.

To these deposits has to be referred the formation of the Floating Island: a round-shaped portion of fen, originated around lake margins in waterlogged areas, that was somehow isolated from the bank and started to float.

The macroclimate in the area is submediterranean. Deciduous species-rich oak forests dominate the slopes of the catchement, and Mediterranean evergreen woody species are scattered on topographical discontinuities.

The comparison between the time series of the local precipitation and the discharge data related to the Fibreno river points out an alternance of dry and wet periods in respect of the mean yearly value of precipitation. According to precipitation time series of several meteo stations located in Central Italy, the last dry period started in 1980 and it's not over yet. In consequence of this, the precipitation variability in the time series draws an evidence of availability constraints of the renewable water resources in the ecosystems.

The Floating Island of Lake Fibreno

EUROPEAN VEGETATION SURVEY

16th Workshop

ROME (Italy), March 22-26, 2007

DIPARTIMENTO DI BIOLOGIA VEGETALE

UNIVERSITA' DEGLI STUDI DI ROMA

"LA SAPIENZA" ORTO BOTANICO

Largo Cristina di Svezia, 24 Roma

SAPIENZA UNIVERSITÀ DI ROMA

16th WORKSHOP OF THE I.A.V.S. WORKING GROUP FOR THE EUROPEAN VEGETATION SURVEY (E.V.S.) "CHANGES IN VEGETATION"

WORKSHOP PROGRAMME

March 22 (Thursday)

15.30 - 18.00: pre-Workshop Colloquium on the use of Ellenberg Zeigerwerte (indication values) in phytosociology :

- *Dengler & Jansen - A re-assessment of the Ellenberg indicator values based on the large vegetation database of Mecklenburg-Vorpommern with an advanced statistical method;*
- *Fanelli & Testi - Land monitoring through Ellenberg eco-maps;*
- *Pignatti - The use of Ellenberg indicator values for the classification of plant communities.*

March 23 (Friday)

9.00 - registration / 9.30 - 12.30 scientific session:

Oral presentations

- *Illyés, Chytrý & Botta-Dukát - Study of semi-dry grasslands along a climatic gradient across Central Europe;*
- *Molnár et al. - Dynamics of the Hungarian vegetation as seen from the MÉTA-database;*
- *Vittoz & Guisan - New perspectives on floral enrichment of alpine summits;*
- *Marchese, Poli Marchese & Grillo - Floristic changes on the Quercus ilex forests of the Mt. Etna natural Park (Southern Italy);*
- *Duuren - Changes in Dutch vegetation;*
- *Rodwell - Landscape and vegetation change in a Northern English village 1500-2000.*

14.30-16.00 scientific session: Poster session A

- *Bacchetta et al. – Integration of vegetational and multitemporal landscape analysis: a case study in the abandoned mining district of Montevecchio (South-Western Sardinia);*
- *Carni et al. - The changes in vegetation cover in the abandoned landscape of SE Slovenia;*
- *Ching Feng et al. - Change of Floristic Composition along Elevation Gradient in Taiwan;*
- *Fanelli et al. - Soil parameters as indicators of succession in beech forest (Central Apennines);*
- *Grinberga - Impacts on aquatic vegetation under climate changes in Latvia: case study of the river Salaca;*
- *Laime & Kalviskis - Changes in Coastal Dune Vegetation of Latvia;*
- *Lososova - Species trait changes in anthropogenic vegetation in the Czech Republic over the last century;*
- *Pal et al. - Changes in arable weed vegetation in the last 5 decades in South-Western Hungary;*
- *Richter - Cinque Terre and Eolian Islands revisited – vegetation change 20 years after;*
- *Richter - Stromboli revisited: long-term plant succession on an active volcano island;*
- *Tsiripidis, Bergmeier et al. - On the determination of differential taxa;*
- *Willner et al. - Trends of forest floor vegetation at the Integrated Monitoring Site "Zöbelboden" in the Northern Calcareous Alps (Austria).*

16.30 - 18.00 Oral session:

- *Cross, Douglas, Dromey, Lynn & Ryan - Changes in the vegetation of raised bogs in Ireland over the last 30 years;*
- *Apostolova & Meshinev Some long term vegetation changes in "Vrachanski Balkan" National Park;*
- *Pakalne - Changes in the mire vegetation of Latvia;*
- *Szabo, Szeglet et al. - Changing littoral vegetation of Lake Balton;*
- *Roleček - Variability of Central-European subcontinental oak forests on geographical scale.*

March 24 (Saturday)

9.30 - 12.30 scientific session:Oral presentations

- *Michl, Huck & Dengler - Classification of the montane-subalpine tall-herb vegetation (Mulgedio-Aconitetea) in temperate and boreal Europe based on individual relevés;*
- *Golub & Sorokin - Circumpolar plant communities of the cl. Honckenyo-Elymetea arenarii Tsc. 1966;*
- *Rove - Elymo-Ammophiletum arenariae and Festuco-Koelerietum glaucae along the Gulf of Riga;*
- *Ewald - Bimodal N-indicator spectra of reveal abrupt eutrophication of pine forest;*
- *Camarda et al. - Climax vegetation and evolution-degradation processes in the calcareous area of Monte Albo (North-East Sardinia);*
- *Honrado et al. - Vegetation dynamics in submediterranean marginal landscapes: patterns, processes and consequences.*

14.30-16.00 scientific session: Poster session B

- *Bisó et al. - Intensification followed by extensification in the Kiskunsag: application of an old-new method;*
- *Bölöni - Changes in forest vegetation of a Pannonian hilly region in the last 150 years;*
- *De Sanctis et al. - Vegetation map of the Province of Rome;*
- *Lysenko - Halophytic vegetation from south-east of the European part of Russia;*
- *Otipkova - Weed communities in the West Carpathians: changes in space and time;*
- *Priede - Tall herb neophyte communities in Latvia – significant characteristic of changeng landscape;*
- *Simonova - Vegetation of rocks versus wall vegetation: what are differences in species traits in these habitat types;*
- *Skodova et al. - Subcerophilous grasslands in Slovak part of Western Carpathians - revised classification;*
- *Spada et al. - History of forest fragmentation in the Roman Campagna: the case of the quarries at the location of Magliana;*
- *Theurillat et al. - Elevational distribution of vascular plant diversity in the Central Apennines, Italy: a long-term project;*
- *Vasilopoulos & Tsiripidis - Riparian forest vegetation of SE Balkan Peninsula;*
- *Zeleny - Diversity of vegetation in deep river valleys (Czech Republic).*

16.30 - 18.00 Oral presentations

- *Tzonev & Roussakova - Natural and anthropogenic changes in the Bulgarian vegetation during the last 100 years;*
- *de Ronde & Haveman - Monitoring of local vegetation changes: the use of random relevés & GIS;*
- *El-Sheikh - Analysis of old forest growth from tree size structure variables in the wadi Gerzeez, south of Oman.*

Oral presentations

- *Spada et al. - Vegetation dynamics versus human impact: the management the coastal ecosystems in Lazio;*
- *Storm, Stroh & Schwabe - The ruderalization index: a sensitive tool to indicate ruderalization processes in vegetation dynamics? ;*
- *Casella et al. - Hydrological gradients and vegetation changes in the catchment of lake Fibreno..*

March 25 (Sunday) 9.00 - 19.00 full day excursion to lake Fibreno

March 26 (Monday)

9.00 - 12.30 scientific session:

9.00 - 10.30 Oral presentations

- *Chytrý - Vegetation of the Czech Republic - a new monographic series;*
- *Gratani et al. - Adaptive responses of mediterranean maquis species to climate;*
- *Camarda, Brundu, Manca & Piras - The "Carta della Natura" mapping project in the Supramonte area (Central-East Sardinia): Integrating field surveys with GIS and RS techniques;*
- *Csiky et al. - CoenoDatRef, the phytosociological reference database of Hungarian natural and semi-natural vegetation types;*
- *Schaminée - New achievements of SynBioSys Europe: the present state of art.*

10.30 - 11.30 Poster session C

- *Botta-Dukát - Recognizing reliable and vague clusters by cross-validation;*
- *Regione Lazio – Assessorato et Direzione Regionale Ambiente - Application of the EC Habitats Directive (Council Directive 92/43/EEC) in the conservation of plant populations and communities in their natural habitats in the region of Lazio. Management and strategies;*
- *Regione Lazio – Assessorato et Direzione Regionale Ambiente - Application of the EC Habitats Directive (Council Directive 92/43/EEC) in the conservation of plant populations and communities in their natural habitats in the region of Lazio. Case studies in sensitive areas;*
- *Janissova et al. – Diversity of grassland vegetation in Slovakia - preliminary summary of national vegetation survey;*
- *Keizer-Sedlakova et al. - The European status of Dutch plant communities: distribution and responsibilities;*
- *Rodwell, Jefferson et al. - British Lowland Grasslands in a European context: distribution, key threats and research needs;*
- *Tichy et al. - New extension of TWINSPAN algorithm;*
- *Spada, Schirone et al - Causalistic distribution of Quercus suber in Lazio (Central Italy).*

11.30 –12.30 Business Meeting: Summary, Publication, Planning for EVS 2008 (Topics, dates & location).

Departures

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