



BULGARIAN ACADEMY OF SCIENCES
INSTITUTE OF BOTANY



20-26 June 2006

Sofia

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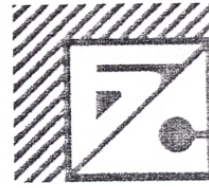
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Address of the Organizing Committee:

IV BBC

Institute of Botany

Bulgarian Academy of Sciences

Acad. Georgi Bonchev Street, Bl. 23

1113 Sofia, Bulgaria

e-mail: iv_bbc@bio.bas.bg web site: www.bio.bas.bg/botany/iv_bbc/

Foreword

Dear Colleagues,

On behalf of the auspice of the IV Balkan Botanical Congress - Acad. Ivan Yuhnovsky, President of BAS and on behalf of the Organizing Committee I warmly welcome you in Sofia.

We can say that the motto of the IV Balkan Botanical Congress "Nature without borders" is supported by your presence in Sofia and your participation in the scientific program. Scientists from 20 countries will demonstrate their achievements in more than 200 lectures and 400 posters organized in 7 scientific areas.

The Congress allows you (although for a short time) to be in touch with the Bulgarian nature - mountains Vitosha, Pirin and Rhodope, the valley of Strouma River, the South Black Sea Coast. Enjoy it from the view of an expert.

I am convinced that the discussions in the Congress halls and poster sessions, the contact with nature and friendly meetings will be the catalysts of future new ideas and projects, the establishment of new international partnerships with which our science will respond to the challenges of the future.

President of the Organizing Committee:



/Prof. Dimitar Peev/

Accumulation of heavy metals by three *Viola* species grown on abandoned arsenic mine Allehar in R Macedonia

G. Drazic, D. Markovic*, N. Mihalovic, I. Novovic*, B. Stevanovic**

Institute for Application of Nuclear Energy, Belgrade, Serbia and Montenegro;

**Institute of Physics, Belgrade, Serbia and Montenegro; **Institute of Botany,*

Faculty of Biology, University of Belgrade, Belgrade, Serbia and Montenegro

The study focused on *Viola macedonica*, *V. allehariensis* and *V. arsenica*, growing in the same site in Macedonia, on arsenic soil. All three species of the same genus and section *Melanium* are the Balkan endemic plants of different life forms and various longevity of their life span. They could be regarded as arsenic resistant plants. Accumulation of As, Fe, Mn, Cu, Zn, Ni and Pb in roots and shoots were determined by U-shaped DC plasma and AA spectrometry methods. The concentration of As in the roots was from 783 mg kg⁻¹ dry mass of *V. macedonica* to 2024 mg kg⁻¹ dry mass of *V. allehariensis* and *V. arsenica*. The lower accumulation of As in the shoots varied from 14 mg kg⁻¹ dry mass of *V. macedonica* to 310 mg kg⁻¹ dry mass of *V. allehariensis*. The relationships among heavy metals concentration in soil and plant, as well as between roots and shoots of each *Viola* species were discussed.

Key Words: *Viola*, arsenic, heavy metals, accumulation.

Plant diversity of Fereizi region in Binalood mountains, NE Iran

H. Eijehadi, K. Emadzade, M. reza Joharchi, F. Memariani

Research Center for Plant Science, Ferdowsi University of Mashhad, Mashhad, Iran

Fereizi region is located in the northern aspect of Binalood mountains, NE Iran. Special characteristics of the area make it a suitable habitat of diverse plant species including several endemics. This study concerns a floristic and chorological survey carrying central importance in vegetation description and analysis. Vascular flora of the region was collected and identified according to conventional methods in plant systematic. Floristic composition of the area, chorological characters and life forms of plant species were determined by special reference to endemic, rare and medicinal plants. The result of field investigation was collecting and identifying of the total about 550 plant species belonging to 290 genera and 52 families. The main plant families of the area were Asteraceae and Fabaceae with 78 and 57 species, respectively. *Astragalus* was the main dominant genus containing 34 species.

Key Words: Floristic list, phytogeography, endemic spp., Iran.

Plant communities of *Pinus sylvestris* forests in W. Rhodope, NE Macedonia, Greece

E. Eleftheriadou, I. Tsiripidis*, K. Theodoropoulos

Aristotle University of Thessaloniki, Faculty of Forestry and Natural

Environment, Laboratory of Forest Botany - Geobotany, 54124 Thessaloniki,

*Greece; *Aristotle University of Thessaloniki, School of Biology, Laboratory of Systematic Botany and Phytogeography, 541 24 Thessaloniki, Greece*

In Greece, *Pinus sylvestris* forests are restricted in the northern part, forming either pure or mixed stands with *Fagus sylvatica*, *Picea abies* and *Betula pendula*. In the Greek part of the west Rhodope, they replace partly *Fagus*, and *Picea* forests as result of the human impact. However, permanent-communities with *Pinus sylvestris* can be found on poor soils. These forests have been studied using the Braun-Blanquet method, with the help of twelve phytosociological relevés. Syntaxonomical comments, as well as, information about the site characteristics, structure and syndynamical position of the distinguished vegetation units are given.

Key Words: *Pinus sylvestris*, Rhodopi, Greece, vegetation units.

Flora and vegetation of "Kamchia Sands" Protected area

M. Filipova-Marinova, J. Tumbarkova*, D. Filipova*, D. Pavlov*

*Museum of Natural History, Varna, Bulgaria; *Directorate of the "Golden Sands" Nature Park, Bulgaria*

The "Kamchia Sands" Protected area is part of the Nature Komplex "Kamchia", situated near the mouth of the Kamchia River, western Black Sea coast. 119 vascular plant species from 32 families, 16 rare and threatened plant species, and 7 different plant communities was founded in 2005. Two plant species (*Verbascum glanduligerum* Vel. and *Lepidotrichum uechritzianum* (Bornm.) Vel.) are included in the List of rare, threatened and endemic plants of Europe. 9 species are protected by Bulgarian Biodiversity Law.

Key Words: Geobotany, psammophytes, rare plants.

Effect of sowing times and mixed and pure cultivation on the yield and secondary metabolites of chamomile cultivars

Y. Filizadeh

Department of Agronomy, Shahed University, P.O. Box: 18151/159 Tehran,

Iran; E-mail: filizadeh@shahed.ac.ir

Chamomile (*Matricaria recutita* L.) is an important medicinal plant, which used for chamazulene and other secondary metabolites. The effects of 3 planting dates (4 April, 4 May, and 4 June), mixed and pure cultivation and cultivars (Bona and Gorai) on plant growth yield components and the chamazulene content was conducted during 2002-2004. Results showed that sowing dates had significant effects on Chamomile flower size, flower yield and the number of flowers per plant. Also the highest content of chamazulene were obtained on 4 October when the production of flowers were at high