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From Population Biology to Community Ecology

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Book of Abstracts

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Pulsatilla vulgaris at the Martinsberg site in Rhine Hesse. Photo: Th. Becker

JGU JOHANNES GUTENBERG UNIVERSITÄT MAINZ

GRÜNE SCHULE

Universities of Mainz and Trier

Geobotany

Universität Trier

Program

Friday, 22.05.2015 – Green School and Botanic Garden		
16:00-18:00	**Registration (Green School)**	
18:00-20:00	**Informal meet-up with *Weck, Worscht and Woi* (Green School and Botanic Garden)**	
Saturday, 23.05.2015, morning – Lecture hall "Muschel"		
09:00-09:25	**Welcome address**	
09:25-10:10	Invited talk	**Joachim W. Kadereit** Biogeography of Rhine Gorge Orophytes
10:10-10:30	Regular talk	**Anna Kuzemko**, Dmytro Dubyna, Tatiana Dziuba, Ivan Moysiyenko, Yulia Vasheniak, Maryna Zakharova Syntaxonomy of the sandy and rocky grasslands of Ukraine: preliminary results of large-scale analysis
10:30-11:00	**Coffee break**	
11:00-11:20	Regular talk	**Olga Demina**, Pavel Dmitriev Classification of the psammophytic vegetation of the Don River Basin
11:20-11:40	Regular talk	**Oleksii Kovalenko** Dry grasslands of the National nature park "Pyryatynsky" (Ukraine): syntaxonomy, florotypology and rare plant species
11:40-12:00	Regular talk	**Eleonora Giarrizzo**, Sabina Burrascano, Laura Facioni, Laura Zavattero, Carlo Blasi Causes and outcomes of change in species composition of the Apennine semi-natural grasslands in the last fifty years
12:00-12:20	Regular talk	**Emanuela Carli**, Piera Di Marzio, Carmen Giancola, Attilio Di Giustino, Bruno Paura, Giovanni Salerno, Agnese Tilia, Carlo Blasi Good practices of management of 6210(*) dry grasslands in Molise (Central Italy)
12:20-12:40	Regular talk	**Jürgen Dengler**, Iva Apostolova, Thomas Becker, Idoia Biurrun, Steffen Boch, Iwona Dembicz, Christian Dolnik, Nikolai Ermakov, Monika Janišová, Itziar García-Mijangos, Riccardo Guarino, Anna Kuzemko, Swantje Löbel, Hristo Pedashenko, Mariya Polyakova, Eszter Ruprecht & the participants of the EDGG Research Expeditions Diversity patterns in Palaearctic dry grassland vegetation – commonalities and differences across large biogeographic gradients derived from the data of the EDGG Research Expeditions
12:40-14:00	**Lunch break Mensa**	

T17

Syntaxonomy of the sandy and rocky grasslands of Ukraine: preliminary results of large-scale analysis

Anna Kuzemko, Dmytro Dubyna, Tatiana Dziuba, Ivan Moysiyenko, Yulia Vasheniak, Maryna Zakharova

At the present stage of phytosociology the syntaxonomic structure of sandy and rocky vegetation in Europe is the topic of heated discussions. There are different opinions concerning the affiliation of its communities to different classes — *Koelerio-Corynephoretea*, *Festucetea vaginatae*, *Sedo-Scleranthetea*, as well as on the volume and the relations of these classes, syntaxonomic status of orders and alliances in their composition. The aim of our work is a large-scale analysis of the target vegetation types for the territory of Ukraine on the basis of modern methods of phytosociological studies and solution of the controversial issues of their syntaxonomy. In total were used 4497 relevés of grassland vegetation from Ukrainian Grassland Database (GIVD code EU-UA-001) which were performed with TWINSPAN (modified). At each stage of analysis we checked the level of clusters homogeneity using indices of Total Inertia, Euclidean Distance, and Whittaker Beta-Diversity. Peculiarities of ecological differentiation of syntaxa were determined using DCA ordination in R-project software (integrated in JUICE). At the first stage of analysis were separated 943 relevés of sandy and rocky grasslands for further analysis. It was revealed that studied vegetation represented by communities of four classes: *Koelerio-Corynephoretea*, *Festucetea vaginatae*, *Ammophiletea* and *Cakiletea maritimae*. The first class includes two subclasses. The vegetation of rocky outcrops belonged to the Sedo-Scleranthenea subclass with two orders: *Alysso-Sedetalia* (on carbonate outcrops) and *Sedo-Scleranthetalia* (on granite outcrops). Vegetation of continental sands assigned into the Koelerio-*Corynephorenea* subclass, which includes two orders: *Corynephoretalia canescentis* (on acidic sands of the fluvioglacial sediments in the northern part of Ukraine) and *Sedo acris-Festucetalia* (communities of neutral riverine sands in the Forest and Forest-Steppe zones of Ukraine). The *Festucetea vaginatae* class includes communities on the sands of various origins in southern Ukraine. This class is represented by one order *Festucetalia vaginatae*, although taking into account degree of internal differentiation of the class, we do not exclude possibility to describe a new orders within the class. The *Ammophiletea* includes vegetation of coastal dunes and includes one order *Elymetalia arenarii*. Communities on strandlines of sandy and shingle beaches belonged to the *Cakiletea maritimae* class with one order *Euphorbietalia peplidis*. The aforementioned syntaxonomic decisions are confirmed by the results of DCA-ordination, which proves the leading role of soil reaction in ecological differentiation for the syntaxa of studied vegetation at the higher level.

Keywords: *Koelerio-Corynephoretea*, *Festucetea vaginatae*, *Ammophiletea*, *Cakiletea maritimae*, Ukraine