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ABSTRACTS

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TWO NEW SPECIES OF *DISPERIS* (ORCHIDACEAE, ORCHIDOIDEAE) FROM CENTRAL WEST AFRICA

DARIUSZ L. SZLACHETKO & AGNIESZKA KOWALKOWSKA

Abstract. Two new species of *Disperis* – *D. fayi* from the Central African Republic and *D. szolc-rogozinskiana* from Cameroon – are described, illustrated and compared with their putative closest relatives.

Key words: Orchidaceae, Orchidoideae, *Disperis*, new species, Africa

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STRUCTURE AND DEVELOPMENT OF INTER- AND INTRAXYLARY PHLOEM IN *LEPTADENIA RETICULATA* (ASCLEPIADACEAE)

VIDYA S. PATIL & KISHORE S. RAJPUT

Abstract. Observations by light microscopy showed that in *Leptadenia reticulata* (Retz.) Wight & Arn. (Asclepiadaceae) the internal phloem differentiates centripetally as discrete strands simultaneously with the centrifugal differentiation of the external protophloem in the first visible internode of the stem. Internal phloem strands are discrete and develop from the marginal semi-mature parenchyma cells of the pith. Thereafter protoxylem elements are differentiated from the procambium between the internal and external protophloem. As seen in transverse section, external phloem differentiates as a continuous band over time. In mature stems, internal protophloem becomes nonfunctional through heavy accumulation of callose and disappears. New internal phloem strands differentiate from the marginal pith cells that replaced the nonfunctional internal protophloem. As secondary growth progresses further, certain segments of the vascular cambium temporarily lose their normal activity and begin to differentiate secondary phloem both centripetally and centrifugally. Soon afterwards it resumes its normal activity and begins producing thick-walled lignified secondary xylem centripetally. This process is repeated several times, giving rise to a number of islands of thin-walled parenchyma along with sieve tube elements embedded in the thick-walled secondary xylem. As the stem thickens, bands of included phloem became tangentially and radially wider than the islands formed in the beginning. In some samples, arcs of internal cambium eventually differentiated on the outer boundary of internal phloem strands that differentiated unidirectionally, producing only phloem elements centripetally.

Key words: included phloem, inter- and intraxylary phloem, *Leptadenia*

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COMPARATIVE CYTOGENETIC STUDY OF SOME GRASS GENERA OF THE SUBFAMILY POOIDEAE IN IRAN

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Abstract. The cytogenetic characteristics of 53 grass species belonging to 8 genera of subfamily Pooideae were compared in terms of ploidy level, chromosome pairing, heterozygote translocation, unreduced gamete formation and B chromosomes. The genera studied possessed species with diploid, tetraploid and hexaploid chromosome numbers; the genus *Melica* was an exception with its very homogenous group of mainly diploid species. In the genera *Aegilops*, *Bromus*, *Stipa* and *Avena*, some tetraploid and hexaploid species showed diplontic behavior, possibly due to their allopolyploid nature or to mechanisms controlling chromosome pairing, while some diploid and allopolyploid species such as *Bromus brachystachys*, *Festuca arundinacea* and *Secale cereale* subsp. *cereale* formed quadrivalents due to heterozygote translocations. The studied genera differed significantly in their chiasma frequency and distribution as well as chromosome pairing, indicating their genetic distinctness. Unreduced gametes were formed in some of the species due to cytomixis or anaphase failure.

Key words: Cytogenetic analysis, chromosome, heterozygote translocation, Pooideae, polyploidy

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SPRING COMMUNITIES OF THE VEĽKÁ FATRA MTS (WESTERN CARPATHIANS) AND THEIR RELATIONSHIP TO CENTRAL EUROPEAN SPRING VEGETATION

JÁN KLIMENT, JUDITA KOCHJAROVÁ, RICHARD HRIVNÁK & RUDOLF ŠOLTÉS

Abstract. The paper deals with the detailed phytosociological and ecological characteristics of spring communities (*Montio-Cardaminetea*) in the Veľká Fatra Mts (Slovakia, Central Carpathians). Due to its location on the edge of the high Central Carpathians and the variety of substrates, the recorded associations represent almost the complete range of variability of spring vegetation in the Slovak part of Western Carpathians. We found and studied nine plant communities, assigned to four alliances: *Cardamino amarae-Chrysosplenietum alternifolii*, *Caricetum remotae*, *Carici remotae-Calthetum laetae* (*Caricion remotae*), *Philonotido seriatae-Calthetum laetae*, *Brachythecio rivularis-Cardaminetum opicii* (*Cratoneuro filicini-Calthion laetae*), *Cochleario pyrenaicae-Cratoneuretum commutati*, (*Lycopodo europaei-Cratoneurion commutati*), *Cardamino opicii-Cratoneuretum falcati*, *Palustriella commutata* community and *Philonotido calcareae-Saxifragetum aizoidis* (*Cratoneurion commutati*). We also revised the classification of spring communities in Central Europe, using relevés from the Veľká Fatra Mts. Some new names and inverted names of associations are proposed: *Cardamino amarae-Cratoneuretum commutati ass. nov*., *Cochleario pyrenaicae-Cratoneuretum commutati* Th. Müller 1961 *nom. invers. propos*., and *Cardamino opicii-Cratoneuretum falcati* Szafer et Sokołowski 1927 *nom. invers. propos*.

Key words: *Montio-Cardaminetea*, spring vegetation, nomenclature, phytosociology, ecology

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CHRYSOPHYTE STOMATOCYSTS FROM GYPSUM DAMP VEGETATION IN SOUTHERN POLAND

JOLANTA PIĄTEK & MARCIN PIĄTEK

Abstract. The Góry Wschodnie Reserve is a steppe reserve situated in the Wyżyna Małopolska upland in southern Poland. Two small patches of damp vegetation, periodically wet, are located within predominantly xerothermic vegetation overgrowing gypsum-rich soils. Water samples collected there in 2005 and 2006 contained many specimens of chrysophyte stomatocysts. SEM studies revealed an unusual diversity of stomatocysts, which were classified under 25 morphotypes. One morphotype is described as new to science, one morphotype is new to Europe, five morphotypes are recorded from continental Europe for the first time, and two morphotypes are new to Poland. The stomatocyst assemblage was dominated by one morphotype, stomatocyst 135 Duff & Smol, and the remaining 24 morphotypes occurred less abundantly. The variability of this morphotype is described, illustrated and discussed in detail. Nine notable stomatocysts are also described and illustrated with SEM micrographs.

Key words: chrysophytes, stomatocysts, new morphotype, morphology, taxonomy, Poland

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PERTUSARIA LACTESCENS (LICHENIZED ASCOMYCOTA, PERTUSARIACEAE), A LICHEN SPECIES NEW TO CENTRAL EUROPE

MARIA KOSSOWSKA

Abstract. The first record of *Pertusaria lactescens* Mudd in Central Europe is reported. The species was found on a basalt outcrop in the Mały Śnieżny Kocioł glacial cirque in the Karkonosze Mts (Sudety Mts, SW Poland).

Key words: *Pertusaria lactescens*, lichens, distribution, Karkonosze Mts, Sudety Mts, Poland, Central Europe

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SOME OVERLOOKED AND RARE XYLARIACEOUS FUNGI FROM POLAND

ANDRZEJ CHLEBICKI

Abstract. Six xylariaceous fungi are reported from Poland: *Biscogniauxia marginata* (Fr.) Pouzar, *Cainia graminis* (Niessl) Arx & E. Müll., *Camarops plana* Pouzar, *Camarops tubulina* (Alb. & Schwein.) Shear, *Daldinia fissa* C. G. Lloyd and *Rosellinia corticium* (Schw.) Sacc. The morphological characters of the stromata are described, and xylariaceous species reported from Poland are listed.

Key words: Xylariales, *Biscogniauxia*, *Cainia*, *Camarops*, *Daldinia*, *Rosellinia*, distribution

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PHLEOGENA FAGINEA (PUCCINIOMYCOTINA, ATRACTIELLALES)IN POLAND – NOTES ON ECOLOGY AND DISTRIBUTION

ANDRZEJ SZCZEPKOWSKI, ANNA KUJAWA, ANNA BUJAKIEWICZ, JOANNA NITA, DARIUSZ KARASIŃSKI, MAREK WOŁKOWYCKI & MARCIN S. WILGA

Abstract. The current distribution of *Phleogena faginea* (Fr.: Fr.) Link in Poland is presented, based on literature data as well as 19 new localities. Six tree species and one fungus as a new substrate for *P. faginea* in Poland are reported. These new records confirm the high ecological plasticity of the species, which the authors found in natural stands, managed forests and an urban park. The ecological preferences of the species are discussed. Wood of *Carpinus betulus* is the most frequent type of substrate for *P. faginea* in Poland. Based on the new distribution data for *P. faginea* in Poland, a change of its red list category is proposed.

Key words: *Phleogena faginea*, fungi, Atractiellales, Phleogenaceae, ecology, distribution, Poland

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DIANTHUS CAMPESTRIS (CARYOPHYLLACEAE), A SPECIES NEW TO POLAND

PAWEŁ PAWLIKOWSKI

Abstract. *Dianthus campestris* M. Bieb. is a species new to the flora of Poland. This southeastern European plant is restricted to the steppe and forest-steppe zones. In 2005 it was found near Sejny in the northeastern Poland. The species grows in seminatural, dry-mesic grasslands and its population is numerous. The origin of the population, the status of the species in the flora of Poland, and the identity of subspecies are uncertain.

Key words: Caryophyllaceae, *Dianthus campestris*, distribution, NE Poland

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Botanical Notes

NOTES ON *LEPTOGIUM* AND *DERMATOCARPON* SPECIES (LICHENIZED ASCOMYCOTA) FROM A BASALT OUTCROP IN MAŁY ŚNIEŻNY KOCIOŁ CIRQUE (KARKONOSZE MTS, POLAND)

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