

Herbarium and Department of Botany  
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**RESEARCH INTERESTS**

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My fundamental research interests are the evolutionary and ecological mechanisms shaping the diversity and distributions of vascular plants with main focus on polyploid genera of *Hieracium* and *Pilosella*, both with prevalent asexual seed reproduction – apomixis, and *Centaurea*, which encompasses several important plant invader species. Since apomictic taxa are typically allopolyploids, my research focuses on polyploidization and interspecific hybridization and effects of these phenomena on evolution of apomixis in natural and artificial polyploids, and on consequences of apomictic reproduction and polyploidy on fitness, and taxonomic and distributional patterns.

**EDUCATION**

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2013	Associate Professor in Botany, Masaryk University, Brno, Czech Republic
2003	PhD in Botany, Institute of Botany, Bratislava, Slovakia (supervisor: Karol MARHOLD)
1995	MSc in Plant Physiology and Genetics, P.J. Šafárik University Košice, Slovakia (supervisor: Pavol MÁRTONFI)

**APPOINTMENTS**

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2013-	Head Curator and Associate Professor, Charles University, Praha, Czech Republic
2013-2016	Research Associate, Institute of Botany, Czech Academy of Sciences
2007-2012	Post-doctoral Research Associate, Department of Biology, Ecology & Evolution Unit, University of Fribourg, Switzerland
2005-2007	Post-doctoral Research Associate, Laboratoire d'Ecologie Alpine, Université J. Fourier, Grenoble, France
2003-2005	Teaching Assistant, Institute of Biology and Ecology, P.J. Šafárik University, Košice, Slovakia
1999-2005	Research Assistant (part time), Department of Vascular Plant Systematics, Institute of Botany, Slovak Academy of Sciences, Bratislava, Slovakia
1998-2003	Research Assistant, Department of Botany, Institute of Biology and Ecology, P.J. Šafárik University, Košice, Slovakia

**TEACHING**

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Košice (1999-2005): Field courses in Botany, Seminars on Plant Taxonomy, Seminars on Biogeography, Practicals in Systematic Botany, Practicals in Plant Ecology

Fribourg (2008-2012): Advanced Topics in Ecology & Evolution ('Ecological and evolutionary significance of polyploidy'), Methods in Biology ('Flow cytometry in ecological and evolutionary research'), Ecology ('Ecological genetics')

Bratislava (2010): 'Introduction to R' (with T. Clerc), 4-days course for the staff of the Institute of Botany, Slovak Academy of Sciences

Praha (2014-): Plant Breeding Systems (with J. Chrtek), Introduction to study of plant biodiversity (with K. Marhold, T. Fér), Phytogeography, Scientific writing seminar (with T. Herben), Field course in Botany

## **STUDENTS SUPERVISED**

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### **BSc**

*University of Fribourg (co-supervisor):* David FREY (2011)

### **MSc**

*University of Košice:* Karol KRAK (2004), Katarína KOVALČIKOVÁ (2004), Juraj PAULE (2004), Světlana SYCHROVÁ (2004), Timea REZEŠOVÁ (2005), Barbora ŠINGLIAROVÁ (2005), Daniela TOMČÍKOVÁ (2006), Lucia LENGYELOVÁ (2007, *co-supervisor*)

*University of Fribourg (co-supervisor):* Alexandre FARKAS (2009), Emilie GEX-FABRY (2010), Elham TARBUSH (2011), Sandrine MICHEL (2013), Valentine RENEVEY (2013)

*Charles University:* Lukáš VLK (2017), Pavel ZDVOŘÁK (2017)

### **PhD**

*Comenius University, Bratislava:* Barbora ŠINGLIAROVÁ (2010)

*Charles University, Prague:* Matthias HARTMANN (2018), Jan PINC (2020), Begoña Quirós DE LA PEÑA (2022-)

### **Internship**

*University of Fribourg:* Andreas KELLER (2011)

*Charles University:* Christoph ROSCHE (2014-2015: 6 months)

## **FUNDED RESEARCH (Principal / co-Principal Investigator or Coordinator)**

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- 2022-2024 Young kids or old migrants? Colonization versus in situ speciation of allopolyploid apomicts in European alpine sky islands (co-PI; Czech Science Foundation)
- 2017-2019 Repeatome dynamics in the earliest evolutionary stages of apomictic plants (co-PI; Czech Science Foundation)
- 2014-2016 Geographical parthenogenesis: evolutionary and ecological significance of apomictic reproduction in vascular plants (PI; Czech Science Foundation)
- 2013-2016 Digitalization of type specimens conserved at the Herbarium collections of the Charles University in Prague (PRC) (PI; A. Mellon Foundation, USA)
- 2007-2011 Spread and impact of invasive plants (coordinator; NCCR Plant Survival of the Swiss National Science Foundation to Heinz Müller-Schärer)
- 2008-2010 Origin and evolution of high mountain flora of the Carpathians; PhD thesis of B. Šingliarová (PI; Scientific Grant Agency of the Ministry of Education of Slovak Republic and the Slovak Academy of Sciences)
- 2005-2007 Plant Migration and Ice Age (PI; Marie Curie individual IntraEuropean Fellowship, the European Commission)
- 2004-2006 Taxonomic and micro-evolutionary problems in the genera *Hieracium* and *Pilosella* (Asteraceae, Lactuceae) (PI; Scientific Grant Agency of the Ministry of Education of Slovak Republic and the Slovak Academy of Sciences)

- 2000-2002 Biosystematic study of selected species of the genus *Hieracium* sect. *Alpina* in Central Europe (PI; Scientific Grant Agency of the Ministry of Education of the Slovak Republic and the Slovak Academy of Sciences)
- 2001 Biosystematic study of the genus *Pilosella* (PI; Internal Grant System of the Faculty of Science, P. J. Šafárik University in Košice)

**Co-investigator in several other research projects:** The Flora of Slovakia (4 projects); Checklist of Non-Vascular and Vascular Plants of Slovakia, The Karyological Atlas of the flora of Slovakia; IntraBioDiv - Tracking surrogates for intraspecific biodiversity: towards efficient selection strategies for the conservation of natural genetic resources using comparative mapping and modelling approaches, 6<sup>th</sup> Research Framework Programme of the EU; Identification Key of Ferns and Flowering Plants of the Slovak Republic, Stress induced memory in clonal plants (GAČR project); Conserving flora of the Carpathians (Royal Botanical Gardens Kew, UK, 2020-2021).

#### **FELLOWSHIPS AND AWARDS**

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**The Marie Curie IntraEuropean Fellowship.** European Commission, Laboratoire d'Ecologie Alpine, J. Fourier Université, Grenoble, France, 2005-2007.

**The Award of the Doyen of the Faculty of Science for research activities.** P.J. Šafárik University, Košice, 2006

**The Socrates/Erasmus Teaching Mobility.** European Commission, Laboratoire d'Ecologie Alpine, J. Fourier Université, Grenoble, France, 2001 and 2003.

**The fellowship of the French Government.** Station de génétique végétale, Ferme du Moulon, INRA/UPS/CNRS/INAPG, Gif sur Yvette, France, 1998-99

#### **CONFERENCES ATTENDED AND ORGANIZED**

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The 3<sup>rd</sup> interdisciplinary symposium 'Biogeography of the Carpathians', Prague, Czechia, September 2022 (Principal organizer)

Conférences Jacques Monod, 'Sex uncovered: the evolutionary biology of reproductive systems', Roscoff, France, April 2018 (speaker)

The 2<sup>nd</sup> interdisciplinary symposium 'Biogeography of the Carpathians: Ecological and evolutionary facets of biodiversity', Cluj, Romania, September 2017 (Co-organizer & speaker)

3<sup>rd</sup> BioSyst.EU conference, Gothenburg, Sweden, August 2017 (speaker)

15<sup>th</sup> meeting of European Society for Evolutionary Biology (ESEB), Lausanne, Switzerland, August 2015 (speaker)

22<sup>nd</sup> International Symposium 'Biodiversity and Evolutionary Biology' of the German Botanical Society (DBG), Dresden, Germany, March 2014 (speaker)

Symposium 'Biogeography of the Carpathians: Evolution of Biodiversity in a Spatiotemporal Context', Kraków, Poland, September 2013 (Co-organizer & speaker)

Symposium 'Rapid evolution during biological invasions', Fribourg Ecology & Evolution days (2012) (speaker)

19<sup>th</sup> International symposium "Biodiversity and Evolutionary Biology" of the German Botanical Society, Vienna, Austria, September 2010 (speaker)

"Biology 2010", Neuchâtel, Switzerland, February 2010 (speaker)

International Conference on "Polyploidy, Hybridization and Biodiversity", Saint Malo, France, May 2009 (speaker)

Co-organiser of the symposium 'Rapid evolution during biological invasions', Fribourg Ecology & Evolution days (2012)

Co-organiser of the symposium 'Polyploidization, plant fitness and trophic interactions', Fribourg Ecology & Evolution days (2009)

Organiser of the '39<sup>th</sup> Floristic Course of the Slovak Botanical Society and the Czech Botanical Society' held in Gelnica (Slovakia, 2000)

Organiser or co-organiser of four international '*Hieracium* workshops' (1999, 2001, 2004 and 2007)

## **LABORATORY AND STATISTICAL SKILLS**

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Experience with sampling of plant material for specific use (molecular analysis, flow cytometry, common garden experiments etc), plant determination, plant morphology and anatomy, cultivation experiments, experimental design, techniques of plant ecology and ecophysiology, breeding systems, experimental hybridisation, chromosome counting, flow cytometry analysis, basic microscopic techniques, DNA isolation, electrophoresis, PCR techniques, cloning, sequencing, AFLP and SSRs analyses. Statistical analyses and evaluation of morphological, molecular and ecological data using R software, MrBayes, Beast, etc.

## **OTHER SCIENTIFIC ACTIVITIES**

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### **Membership of professional societies**

Member of the Slovak Botanical Society

Member of the Czech Botanical Society

Member of International Organization of Plant Taxonomists

### **Membership of editorial boards of scientific journals**

Nordic Journal of Botany (Sweden). Subject Editor, 2013-2020

Biologia, Bratislava, section Botany. Member of the Editorial Board, 2004-2011, 2018-

Contribuții Botanice (Romania). Member of the Editorial Board, 2007-present

Bulletin of the Slovak Botanical Society. Co-editor, 1998-1999

### **Guest editor**

Together with M. Pușcaș (Cluj, Romania), M. Ronikier (Kraków, Poland) and B-I. Hurdu (Cluj, Romania) guest editor of the special issue of *Plant Systematics and Evolution* entitled 'Biogeography of the Carpathians: towards a better understanding of biodiversity patterns'.

Together with M. Ronikier (Kraków, Poland) guest editor of the special issue of *Biological Journal of the Linnean Society*, 119 (November 2016) entitled 'Biogeography of the Carpathians: evolutionary and spatial facets of biodiversity'.

### **Reviewer for scientific journals**

Acta Botanica Croatica, American Journal of Botany, Annals of Botany, Basic and Applied Ecology, Biochemical Systematics and Ecology, Biologia, Biological Invasions, Biological Journal of the Linnean Society, BMC Evolutionary Biology, BMC Plant Biology, Botanica Helvetica, Botanical Journal of the Linnean Society, Bulletin Slovenskej Botanickéj Spoločnosti, Candollea, Central European Journal of Biology, Contribuții Botanice, Czech Journal of Genetics and Plant Breeding, Ecology and Evolution, Ecography, Flora, Folia Geobotanica, Genetica, Global Ecology and Biodiversity, International Journal of Plant Sciences, Journal of Biogeography, Journal of Plant Research, Journal of Systematics and Evolution, Molecular Ecology, Natura Carpatica, Naturwissenschaften, New Phytologist, Nordic Journal of Botany, Oecologia, Oikos, Phytologia Balcanica, Phytotaxa, Plant Systematics and Evolution, PLoS One, Preslia, South African Journal of Botany, Taxon, Thaiszia, Turkish Journal of Botany, Weed Research, Willdenowia, Zprávy České botanické společnosti.

### **Grant panelist & reviewer for grant agencies**

Panelist of the Czech Science Foundation (GACR) – panel Botany & Zoology (2021-)

Reviewer of grant proposal: Austrian Science Fund (FWF, Austria), Charles University Grant Agency (GAUK, Czechia), Czech Science Foundation (GAČR, Czechia), French National Research Agency (ANR, France), National Science Center (NCN, Poland), Netherlands Organization for Scientific Research (NWO, Netherlands), Scientific Grant Agency of the Ministry of Education and Slovak Academy of Sciences (VEGA, Slovakia)

## LANGUAGES

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Slovak (native), English, French (both fluent written and spoken), Russian (advanced written and spoken), German (basic)

## PUBLICATIONS

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### Peer-reviewed journals:

- Rainer H, Berger A, Schuster TM, Walter J, Reich D, Zernig K, Danihelka J, Galušková H, **Mráz P**, Tkach N, Hentschel J, Müller J, Wagner S, Berendsohn W, Lücking R, Vogt R, Pignotti L, Roma-Marzio F, Peruzzi L. 2023. Community curation of nomenclatural and taxonomic information in the context of the collection management system JACQ. *Biodiversity Information Science and Standards* 7: e112571.
- Šingliarová B, Hojsgaard D, Müller-Schärer H, **Mráz P**. 2023. The novel expression of clonality following wholegenome multiplication compensates for reduced fertility in natural autopolyploids. *Proceedings of the Royal Society B* 290: 20230389.
- Park DS, ... 59 co-authors including **Mráz P**, ... 2023. The colonial legacy of herbaria. *Nature Human Behaviour* 7: 1059–1068.
- Reich D, **Mráz P**, Šída O, Gutermann W. 2023. A long history in a short note – identity and typification of *Hippion obtusifolium* F.W. Schmidt, and synonymy of *Gentianella obtusifolia* (Gentianaceae). *Phytotaxa* 598: 157–166.
- Mráz P**, Španiel S, Skokanová K, Šingliarová B. 2022. Temporal stability of spatial cytotype structure in mixed-ploidy populations of *Centaurea stoebe*. *AoB Plants* 14: plac052.
- Fehrer J, Slavíková R, Paštová L, Josefiová J, **Mráz P**, Chrtek J, Bertrand YJK. 2021. Molecular evolution and organization of ribosomal DNA in the hawkweed tribe *Hieraciinae* (Cichorieae, Asteraceae). *Frontiers in Plant Sciences* 12: 647375.
- Mráz P**, Mrázová V. 2021. Greater reproductive assurance of asexual plant compared to sexual relative in a low density sympatric population – experimental evidence for pollen limitation. *Journal of Evolutionary Ecology* 34:1503–1509.
- Puşcaş M, Ronikier M, **Mráz P**, Bogdan-Iuliu Hurdu BI. 2021. Biogeography of the Carpathians – ecological and evolutionary facets of biodiversity. *Plant Systematics and Evolution* 307: 29
- Breman E, Hurdu BI, Kliment J, Kobiv Y, Kučera J, **Mráz P**, Puşcaş M, Renaud J, Ronikier M, Šibík J, Štubňová E, Tasenkevich L, Turis P, Slovák M. 2020. Conserving the endemic flora of the Carpathian Region: an international project to increase and share knowledge of the distribution, evolution and taxonomy of Carpathian endemics and to conserve endangered species. *Plant Systematics and Evolution* 306: 59.
- Chrtek J, **Mráz P**, Belyayev A, Paštová L, Mrázová V, Caklová P, Josefiová J, Zagorski D, Hartmann M, Jandová M, Pinc J, Fehrer J. 2020. Evolutionary history and genetic diversity of apomictic allopolyploids in *Hieracium* s.str. (Asteraceae): morphological versus genomic features. *American Journal of Botany* 107: 66–90.
- Domina G, Bartolucci F, **Mráz P**, Peruzzi L, Conti F, Šída O, Galasso G. 2020. Typification and taxonomic remarks on five species names in *Cytisus* (Fabaceae). *Phytokeys* 155: 1–14.
- Novaković J, **Mráz P**, Stešević D, Marin PD, Zlatković B, Lakušić D & Janačković. 2020. Typification and taxonomic re-evaluation of *Centaurea crnogorica* and *C. gjurasinii*, two neglected yellow-flowered endemics of the Balkan Peninsula (*Centaurea* sect. *Acrocentron*, Asteraceae). *Phytotaxa* 461: 108–124.
- Pinc J, Chrtek J, Latzel V, **Mráz P**. 2020. Negative effect of inbreeding on fitness of an arcto-alpine *Hieracium alpinum* (Asteraceae), a species with geographical parthenogenesis. *Plant Systematics and Evolution* 306: 62.
- Zdvořák P, **Mráz P**, Rich TCG. 2020. Flow cytometry measurements of ploidy level in British *Hieracium* section *Foliosa* and section *Prenanthoidea* (Asteraceae). *British & Irish Botany* 2: 154–157.
- Mráz P**, Filipaş L, Bărbos MI, Kadlecová J, Paštová L, Belyayev A, Fehrer J. 2019. An unexpected new diploid *Hieracium* from Europe: integrative taxonomic approach with a phylogeny of diploid *Hieracium* taxa. *Taxon* 68: 1258–1277.
- Mráz P**, Zdvořák P. 2019. Reproductive pathways in *Hieracium* s.str. (Asteraceae): strict sexuality in diploids and apomixis in polyploids. *Annals of Botany* 123: 391–403.

- Mráz P**, Zdvořák P, Hartmann M, Štefánek M, Chrtek J. 2019. Can obligate apomixis and more stable reproductive assurance explain the distributional successes of asexual triploids in *Hieracium alpinum* (Asteraceae)? *Plant Biology* 21: 227–236.
- Šingliarová B, Zozomová-Lihová J, **Mráz P**. 2019. Polytopic origin and scale-dependent spatial segregation of cytotypes in primary diploid-autopolyploid contact zones of *Pilosella rhodopea* (Asteraceae). *Biological Journal of the Linnean Society* 126: 360–379.
- Belyayev A, Paštová L, Fehrer J, Josefiová J, Chrtek J, **Mráz P**. 2018. Mapping of *Hieracium* (Asteraceae) chromosomes with genus-specific satellite DNA elements derived from next generation sequencing data. *Plant Systematics and Evolution* 304: 387–396.
- Chrtek J, Hartmann M, Mrázová V, Zdvořák P, Štefánek M, **Mráz P**. 2018. Seed traits, terminal velocity and germination in sexual diploid and apomictic triploid *Hieracium alpinum* (Asteraceae): are apomicts better dispersers? *Flora* 240: 76–81.
- Hartmann M, Jandová K, Chrtek J, Štefánek M, **Mráz P**. 2018. Effects of latitudinal and elevational gradients exceed the effects of between-cytotype differences in eco-physiological leaf traits in diploid and triploid *Hieracium alpinum*. *Alpine Botany* 128: 133–147.
- Kaplan Z, Koutecký P, Danihelka J, Šumberová K, Ducháček M, Štěpánková J, Ekrt L, Grulich V, Řepka R, Kubát K, **Mráz P**, Brůna J. 2018. Distributions of vascular plants in the Czech Republic. Part 6. *Preslia* 90: 235–346.
- Stutz S, **Mráz P**, Hinz HL, Müller-Schärer H, Schaffner U. 2018. Biological invasion of oxeye daisy (*Leucanthemum vulgare*) in North America: pre-adaptation, post-introduction evolution, or both? *PLoS ONE* 13: e0190705.
- Sudová R, Kohout P, Kolaříková Z, Rydlová R, Voříšková J, Suda J, Španiel S, Müller-Schärer H, **Mráz P**. 2018. Sympatric diploid and tetraploid cytotypes of *Centaurea stoebe* s.l. do not differ in arbuscular mycorrhizal communities and mycorrhizal growth response. *American Journal of Botany* 105: 1995–2007.
- Hartmann M, Štefánek M, Zdvořák P, Heřmann P, Chrtek J, **Mráz P**. 2017. The Red Queen hypothesis and geographical parthenogenesis in the alpine hawkweed *Hieracium alpinum* (Asteraceae). *Biological Journal of the Linnean Society* 122: 681–696.
- Rosche C, Hensen I, **Mráz P**, Durka W, Hartmann M & Lachmuth S. 2017. Invasion success in polyploids: the role of inbreeding in the contrasting colonization abilities of diploid versus tetraploid populations of *Centaurea stoebe* s.l. *Journal of Ecology* 105: 425–435.
- Sosnovsky E, Nachychko V, **Mráz P**. 2017. On the typification and nomenclature of *Rhododendron ×intermedium* (Ericaceae). *Phytotaxa* 313: 195–202.
- Bartolucci F & **Mráz P**. 2016. A new combination in the genus *Thymus* and clarification on the type material of *Th. thracicus* (Lamiaceae). *Phytotaxa* 263: 161–164.
- Dauphin B, Grant J & **Mráz P**. 2016. Ploidy level and genome size variation in basal ferns *Botrychium* s.l. (Ophioglossaceae). *Plant Systematics and Evolution* 302: 575–584.
- Mráz P**, Barabas D, Lengyelová L, Turis P, Schmotzer A, Janišová M, Ronikier M. 2016. Vascular plant endemism in the Western Carpathians: spatial patterns, environmental correlates and taxon traits. *Biological Journal of the Linnean Society* 119: 630–648.
- Mráz P**, Ronikier M.\* 2016. Biogeography of the Carpathians: evolutionary and spatial facets of biodiversity. *Biological Journal of the Linnean Society* 119: 528–559. [\*equal contribution]
- Rendina González AP, Chrtek J, Dumalasová V, Fehrer J, **Mráz P** & Latzel V. 2016. Stress induced epigenetic memory alters growth of clonal offspring of white clover. *American Journal of Botany* 103: 1567–1574.
- Rosche C, Durka W, Hensen I, **Mráz P**, Hartmann M, Müller-Schärer H & Lachmuth S. 2016. The population genetics of the fundamental cytotype-shift in invasive *Centaurea stoebe* s.l.: genetic diversity, genetic differentiation and small-scale genetic structure differ between cytotypes but not between ranges. *Biological Invasions* 18: 1895–1910.
- Broennimann O, **Mráz P**, Petitpierre B, Guisan A & Müller-Schärer H. 2014. Contrasting spatio-temporal climatic niche dynamics during the eastern and western invasions of spotted knapweed in North America. *Journal of Biogeography* 41: 1126–1136.
- Mráz P**, Tarbush E & Müller-Schärer H. 2014. Drought tolerance and plasticity in the invasive knapweed *Centaurea stoebe* sl. (Asteraceae): effect of populations stronger than those of cytotype and range. *Annals of Botany* 114: 289–299.
- Turis P, Feráková V, Dítě D, Eliáš P, Hrivnák R, Košťál J, Šuvada R, **Mráz P** & Bernátová D. 2014. Red list of the Carpathian part of Slovakia. *Thaiszia – Journal of Botany* 24: 35–87.
- Mráz P**, Barabas D, Lengyelová L, Turis P, Schmotzer A, Ronikier M. 2013. Patterns of vascular plant endemism in the Western Carpathians in relation to geography, environmental factors and taxon traits. *Acta Biologica Cracoviensia, Series Botanica* 51, Supplement 1: 29.

- Šingliarová B, Šuvada R & Mráz P. 2013. Allopatric distribution, ecology and conservation status of the *Pilosella alpicola* species group (Asteraceae). *Nordic Journal of Botany* 31: 122–128.
- Frey DJ, Haag CR, Kozłowski G, Tison J-M & Mráz P. 2012. High genetic and morphological diversity despite range contraction in the diploid *Hieracium eriophorum* (Asteraceae) endemic to the coastal sand dunes of South-Western France. *Botanical Journal of the Linnean Society* 169: 365–377.
- Mráz P, Garcia-Jacas N, Gex-Fabry E, Susanna A, Barres L, Müller-Schärer H. 2012. Allopolyploid origin of highly invasive *Centaurea stoebe* s.l. (Asteraceae). *Molecular Phylogenetics Evolution* 62: 612–623.
- Mráz P, Španiel S, Keller A, Bowmann G, Farkas A, Šingliarová B, Rohr RP, Broennimann O & Müller-Schärer H. 2012. Anthropogenic disturbance as a driver of microspatial and microhabitat segregation of cytotypes of *Centaurea stoebe* and cytotypes interactions in secondary contact zones. *Annals of Botany* 110: 615–627.
- Mráz P, Bouchier RS, Treier UA, Schaffner U & Müller-Schärer H. 2011. Polyploidy in phenotypic space and invasion context: a morphometric study of *Centaurea stoebe* s.l. *International Journal of Plant Sciences* 172: 386–402.
- Mráz P, Chrtek J & Fehrer J. 2011. Interspecific hybridization in the genus *Hieracium* s.str. – evidence for bidirectional gene flow and spontaneous allopolyploidization. *Plant Systematics and Evolution* 293: 237–245.
- Šingliarová B, Chrtek J, Plačková I & Mráz P. 2011. Allozyme variation in diploid, polyploid and mixed-ploidy populations of the *Pilosella alpicola* group (Asteraceae): relation to morphology, origin of polyploids and breeding system. *Folia Geobotanica* 46: 387–410.
- Šingliarová B, Hodálová I & Mráz P. 2011. Biosystematic study of the diploid-polyploid *Pilosella alpicola* group with variation in breeding system: patterns and processes. *Taxon* 60: 450–470.
- Henery ML, Bowman G, Mráz P, Treier UA, Gex-Fabry E, Schaffner U, Müller-Schärer H. 2010. Evidence for a combination of pre-adapted traits and rapid adaptive change in the invasive plant. *Centaurea stoebe* *Journal of Ecology* 98: 800–813.
- Mráz P, Chrtek J & Šingliarová B. 2009. Geographical parthenogenesis, genome size variation and pollen production in the arctic-alpine species *Hieracium alpinum*. *Botanica Helvetica* 119: 41–51.
- Mráz P & Šingliarová B. 2009. Reports (38–46). In: Mráz P (ed), Chromosome and DNA ploidy level reports of vascular plants – 4. *Biologia, Bratislava* 64: 1086–1088.
- Šingliarová B & Mráz P. 2009. A taxonomic revision of the *Pilosella alpicola* group in the Carpathians. *Preslia* 81: 23–41.
- Šingliarová B, Chrtek J & Mráz P. 2008. Loss of genetic diversity in isolated populations of an alpine endemic *Pilosella alpicola* subsp. *ullepitschii*: effect of long-term vicariance or long-distance dispersal? *Plant Systematics and Evolution* 275: 181–191.
- Krak K & Mráz P. 2008. Trichomes in the tribe Lactuceae (Asteraceae) – taxonomic implication. *Biologia, Bratislava* 63: 616–630.
- Mráz P, Šingliarová B, Urfus T & Krahulec F. 2008. Cytogeography of *Pilosella officinarum* (Compositae): Altitudinal and longitudinal differences in ploidy level distribution in the Czech Republic and Slovakia and the general pattern in Europe. *Annals of Botany* 101: 59–71.
- Slovák M, Šingliarová B & Mráz P. 2007. Chromosome numbers and reproduction mode in *Picris hieracioides* s.l. (Asteraceae), with notes on some other *Picris* taxa. *Nordic Journal of Botany* 25(2008): 238–244.
- Chrtek J, Mráz P, Zahradníček J, Mateo G & Szélag Z. 2007. Chromosome numbers and DNA-ploidy levels of selected species of *Hieracium* s.str. *Folia Geobotanica* 42: 411–430.
- Mráz P, Gaudeul M, Rioux D, Gielly L, Choler P, Taberlet P & IntraBioDiv Consortium. 2007. Genetic structure of *Hypochaeris uniflora* (Asteraceae) suggests vicariance in the Carpathians and rapid post-glacial colonisation of the Alps from an Eastern Alpine refugium. *Journal of Biogeography* 34: 2100–2114.
- Chrtek J jr, Tomková M, Mráz P, Marhold K, Plačková I, Krahulcová A & Kirschner J. 2007. Morphological and allozyme diversity in the *Hieracium nigrescens* group (Compositae) in the Sudety Mountains and the Western Carpathians. *Botanical Journal of the Linnean Society* 153: 287–300.
- Chrtek J jun & Mráz P. 2007. Taxonomic revision of *Hieracium nigrescens* agg. in the Western Carpathians. *Preslia* 79: 45–62.
- Chrtek J jun, Mráz P & Sennikov AN. 2006. *Hieracium* ×*grofiae* – a re-discovered diploid hybrid from the Ukrainian Carpathians. *Biologia, Bratislava* 61: 365–373.
- Kochjarová J, Valachovič M, Bureš P & Mráz P. 2006. The genus *Cochlearia* L (Brassicaceae) in the Eastern Carpathians and adjacent area. *Botanical Journal of the Linnean Society* 151: 355–364.

- Mráz P** & Paule J. 2006. Experimental hybridization in the genus *Hieracium* sstr (Asteraceae): crosses between selected diploid taxa. *Preslia* 78: 1–26.
- Mráz P**. 2006. Reports (23–25). In: Mráz P (ed), Chromosome and DNA ploidy level reports from Central Europe – 2. *Biologia, Bratislava* 61: 117–118.
- Niketić M, Vladimirov V & **Mráz P**. 2006. Chromosome numbers and taxonomic-chorological notes on selected species of *Hieracium* s str (Asteraceae) from Montenegro. *Phytologia Balcanica* 12: 85–97.
- Mráz P**. 2005. *Hieracium silesiacum* (Asteraceae) in Poland. *Polish Botanical Journal* 50: 65–68.
- Mráz P**, Chrtek J, Fehrer J & Plačková I. 2005. Rare recent natural hybridization in the genus *Hieracium* s.str. – evidence from morphology, allozymes and chloroplast DNA. *Plant Systematics and Evolution* 255: 177–192.
- Mráz P**. 2005. Reports (4–11). In: Mráz P (ed), Chromosome and DNA ploidy level reports from Central Europe – 1. *Biologia, Bratislava* 60: 101–103.
- Rotreklová O, Krahulcová A, **Mráz P**, Mrázová V, Mártonfióvá L, Peckert T & Šingliarová B. 2005. Chromosome numbers and breeding systems in some species of *Hieracium* subgen. *Pilosella* from Europe. *Preslia* 77: 177–195.
- Chrtek J jun, **Mráz P** & Severa M. 2004. Chromosome numbers in selected species of *Hieracium* s.str. (*Hieracium* subgen. *Hieracium*) in the Western Carpathians. *Preslia* 76: 119–139.
- Mráz P** & Szelağ Z. 2004. Chromosome numbers and reproductive systems in selected species of the genera *Hieracium* L. and *Pilosella* Hill. (Asteraceae) from Romania. *Annales Botanici Fennici* 41: 405–414.
- Šingliarová B & **Mráz P**. 2004. Cyto geography of *Pilosella officinarum* (Asteraceae) in the Western Carpathians and adjacent part of Pannonia (preliminary results). *Bulletin Slovenskej Botanickej Spoločnosti* 26, Supplement 10: 176–180. [In Slovak with English abstract]
- Mráz P**. 2004. Chorological and ecological notes on the *Campanula rotundifolia* complex and on *Campanula carpatica*. *Bulletin Slovenskej Botanickej Spoločnosti* 26: 129–135. [In Slovak with English abstract]
- Mráz P**. 2003. *Hieracium pietroszense* group in the Carpathians. *Folia Geobotanica* 38: 299–318.
- Mráz P**. 2003. Mentor effects in the genus *Hieracium* sstr (Compositae, Lactuceae). *Folia Geobotanica* 38: 345–350.
- Mráz P**. 2003. *Hieracium piliferum* group in the West Carpathians. *Biologia, Bratislava* 58: 29–36.
- Mráz P**. 2003. *Orobancha alsatica* agg in the town of Košice (Volovské vrchy Mts, Eastern Slovakia). *Natura Carpatica* 44: 243–246. [In Slovak with English abstract]
- Chrtek J jun, Szelağ Z, **Mráz P** & Severa M. 2002. *Hieracium sparsum* subsp *silesiacum* (Krause) Zahn in the Western Carpathians. *Bulletin Slovenskej Botanickej Spoločnosti* 24: 81–90. [In Czech with English abstract]
- Mráz P**. 2002. Contribution to the knowledge of the *Hieracium rohacsense* group in the Carpathians. *Thaiszia – Journal of Botany* 12: 109–135.
- Mráz P**. 2002. *Carex vaginata* Taush a wrongly reported species from Slovakia. *Thaiszia – Journal of Botany* 12: 185–189.
- Švehlíková V, **Mráz P**, Piacente S & Marhold K. 2002. Chemotaxonomic significance of flavonoids and phenolic acids in the *Hieracium rohacsense* group (*Hieracium* sect *Alpina*; Lactuceae, Compositae). *Biochemical Systematics and Ecology* 30: 1037–1049.
- Mráz P** & Marhold K. 2002. Neotypification of the name *Hieracium bifidum* Kit. ex Hornem. (Asteraceae). *Phyton (Horn)* 42: 117–124.
- Rotreklová O, Krahulcová A, Vaňková D, Peckert T & **Mráz P**. 2002. Chromosome numbers and breeding systems in some species of *Hieracium* subgen *Pilosella* from Central Europe. *Preslia* 74: 27–44.
- Mráz P**. 2001. *Hieracium rohacsense*, the endemic of the Western Carpathians, and notes on its taxonomy, chorology and ecology. *Preslia* 73: 341–358. [In Slovak with English summary]
- Mráz P**. 2001. Chromosome numbers in selected species of *Hieracium* sect *Alpina* (Asteraceae) from Central and Eastern Europe. *Folia Geobotanica* 36: 321–332.
- Mráz P**, Chrtek J & Kirschner J. 2001. Genetic variation in the *Hieracium rohacsense* group (*Hieracium* sect *Alpina*). *Phyton (Horn)* 41: 269–276.
- Mráz P** & Janovicová K. 2001. Flora of the Hlboká dolka valley near Prakovce village (Volovské vrchy Mts). *Natura Carpatica* 41 (2000): 83–88. [In Slovak with English abstract]
- Mráz P** & Marhold K. 1999. Lectotypification of the name *Hieracium rohacsense* Kit. (Compositae). *Willdenowia* 20: 41–44.
- Mráz P**. 1999. *Coronopus didymus* (L.) Sm. – a new neophyte in the flora of Slovakia. *Biologia, Bratislava* 54: 397–400.



- Mráz P.** 1999. *Hieracium alpinum* subsp *augusti-bayeri* Zlatník in the Munții Rodnei Mts – an interesting taxon for the flora of Romania. *Thaiszia – Journal of Botany* 9: 27–30.
- Mráz P.** 1999. Notes on the historical occurrence of *Genistella sagittalis* in broader vicinity of Bratislava. *Bulletin Slovenskej Botanickéj Spoločnosti* 21: 111–117. [In Slovak with English abstract]
- Mráz P.** 1998. *Dolomedes fimbriatus*, Clerck 1758 near Helcmanovce in the Volovské vrchy Mts. *Natura Carpatica* 39: 299–300. [In Slovak with English abstract]
- Mráz P.** 1999. Notes to the phytogeographical boundary of the Slovenský raj Mts and Slovenské rudohorie Mts. In: Leskovjanská A (ed), Zborník zo 7. zjazdu SBS pri SAV, Hrabušice – Podlesok 21.-25. júna 1999 Správa NP Slovenský raj, Spišská Nová Ves. [In Slovak with English abstract]
- Mráz P.** 1998. *Epilobium alsinifolium* in the Volovské vrchy Mts. *Bulletin Slovenskej Botanickéj Spoločnosti* 20: 114–116. [In Slovak with English abstract]
- Ťavoda O & **Mráz P.** 1998. *Lunaria rediviva* L in Slovakia. *Bulletin Slovenskej Botanickéj Spoločnosti* 20: 82–97. [In Slovak with English abstract]
- Mráz P.** 1998. The structure and development of glandular trichomes of *Teucrium montanum* (Lamiaceae). *Biologia, Bratislava* 53: 65–72.
- Šípošová H (ed), Goliašová K, Kmeťová E, **Mráz P**, Michalková E, Peniašteková M & Ťavoda O. 1997. Floristic investigation of the vicinity of Pusté Úľany and Veľký Grob with the emphasis on the wetlands. *Ochrana Prírody* 15: 35–51. [In Slovak with English abstract]
- Mráz P.** 1997. Rediscovery of *Trichoglossum hirsutum* in Slovakia. *Czech Mycology* 49: 239–243.
- Mráz P** & Mikoláš V. 1996. Regional red list of rare and threatened vascular plants of the Volovské vrchy Mts. *Bulletin Slovenskej Botanickéj Spoločnosti* 18: 164–173. [In Slovak with English abstract]
- Mráz P.** 1994. New localities of *Asplenium adulterinum* Milde and *Matteuccia struthiopteris* (L.) Todaro in the Slovenské rudohorie Mts. *Bulletin Slovenskej Botanickéj Spoločnosti* 16: 94–96. [In Slovak with English abstract]

#### Books and book chapters:

- Šingliarová B & **Mráz P.** 2012. *Heliosperma* (Rchb.) Rchb. Ježosemä. In: Goliašová K, Michalková E (eds), Flóra Slovenska VI/3 [Flora of Slovakia VI/3], Veda, Bratislava. [In Slovak]
- Goliašová K, Michalková E & **Mráz P.** 2008. *Campanula* L. Zvonček. In: Goliašová K & Šípošová H (eds), Flóra Slovenska VI/1 [Flora of Slovakia VI/1], Veda, Bratislava, pp 239–349. [In Slovak]
- Marhold K, Mártonfi P, Mered'a P & **Mráz P** (eds). 2007. Chromosome numbers survey of the ferns and flowering plants of Slovakia, Veda, Bratislava, pp 650.  
(electronic version of the database available at <http://www.chromosomes.sav.sk/>)
- Mráz P.** 2002. *Neslia* Desv. Repinka. In: Goliašová K & Šípošová H (eds), Flóra Slovenska V/4 [Flora of Slovakia V/4], pp 588–593, Veda, Bratislava. [In Slovak]
- Mráz P.** *Coronopus* Zinn. Vraňonôžka. In: Goliašová K & Šípošová H (eds), Flóra Slovenska V/4 [Flora of Slovakia V/4], pp 665–672, Veda, Bratislava. [In Slovak]
- Mráz P** & Ťavoda O. 2002. *Lunaria* L. Mesačnica. In: Goliašová K & Šípošová H (eds), Flóra Slovenska V/4 [Flora of Slovakia V/4], pp 455–463, Veda, Bratislava. [In Slovak]
- Mráz P** (co-author). 1998. Ferns and flowering plants. In: Marhold K & Hindák F (eds), Checklist of non-vascular and vascular plants of Slovakia Veda, Bratislava.  
(electronic version of the database available at <http://ibotsavsk/checklist/>)

#### Book reviews:

- Mráz P.** 2006. Slavík B & Štěpánková J (eds), Květena České republiky 7, [Flora of the Czech Republic 7]. *Biologia, Bratislava* 61: 120.
- Mráz P.** 2005. Jonsel B (ed), Flora Nordica, 1, 2, 3. *Biologia, Bratislava* 60.
- Mráz P.** 2003. Sharma AK & Sharma A (eds): Chromosome painting. Principles, strategies and scope. *Thaiszia – Journal of Botany* 13: 104.
- Mráz P.** 2003. Bhojwani SS & Soh WY (eds): Current trends in embryology of angiosperms *Thaiszia – Journal of Botany* 13: 107.
- Mráz P.** 2002. Savidan Y, Carman J G & Dresselhaus T (eds): The flowering of apomixis: from mechanisms to genetic engineering. *Thaiszia – Journal of Botany* 12: 105–106.
- Mráz P.** 2002. Baskin C C & Baskin J M: Seeds ecology, biogeography, and evolution of dormancy and germination. *Thaiszia – Journal of Botany* 12: 88.

**Mráz P.** 2001. Wisskirchen R & Haeupler H (eds): Standardliste der Farn- und Blütenpflanzen Deutschland. *Thaiszia – Journal of Botany* 10: 183–184.

**Miscellaneous publications:**

**Mráz P** (ed). 2007. Chromosome and DNA ploidy level reports from Central Europe – 3. *Biologia, Bratislava* 62: 507–510.

**Mráz P** (ed). 2004. Abstracts of lectures and posters 8<sup>th</sup> *Hieracium* workshop, Dedinky – Slovenský raj, Slovakia, 16.–21. June 2004. *Thaiszia – Journal of Botany* 14, Supplement 1: 1–31.

**Mráz P** (ed) 1999–2003 Interesting floristic records from Slovakia. *Bulletin Slovenskej Botanickéj Spoločnosti* 21: 101–102; 22: 164, 170, 194; 23: 207–212; 24: 213–222; 25: 243–256. [In Slovak]

**Mráz P & Mrázová V** (eds). 2003. *Bulletin Slovenskej Botanickéj Spoločnosti* 25, Supplement 9; *Zprávy České Botanické Společnosti* 38, Příloha 2003/1: 1–140.

**Mráz P.** 2003. History of botanical investigation of the Volovské vrchy Mts. *Bulletin Slovenskej Botanickéj Spoločnosti* 25, Supplement 9; *Zprávy České Botanické Společnosti* 38, Příloha 2003/1: 87–98 [In Slovak with English abstract]

**Mráz P. & Mrázová V.** (eds). 2003. Flora of the Volovské vrchy Mts, and adjacent part of the Branisko Mts, the Čierna hora Mts and the Hornádska kotlina basin. *Bulletin Slovenskej Botanickéj Spoločnosti* 25, Supplement 9; *Zprávy České Botanické Společnosti* 38, Příloha 2003/1: 1–76. [In Slovak with English abstract].