

Mgr. Petr HOLUB, PhD.

born 12 February 1970, Třebíč

Education / Vzdělání

- **M.Sc.** studies: Masaryk University Brno, Faculty of Science, Plant physiology (1988-1993)
M.Sc. Thesis: "The effect of different irradiance and nitrogen form in substrate on growth of *Deschampsia caespitosa*."
- **Ph.D.** studies: Institute of Botany ASCR, Masaryk University Brno, Faculty of Sciences, Plant physiology (1995-2000)
Ph.D. Thesis: "The growth and nitrogen use efficiency of grasses *Calamagrostis* species on deforested areas in the Moravian-Silesian Beskydy Mts."

Employment / Zaměstnání

1993 – 1997: Institute of Landscape Ecology ASCR
1997 – present: Institute of Botany ASCR

Research interest / Zaměření výzkumu

Study of differences in growth of grasses, in nutrient uptake, their retranslocation and evaluation of nutrient use efficiency in various grass stands; field cultivation experiments.

Problematika expanze dlouhostébelných trav do travinných ekosystémů; růst a produkce nadzemní biomasy; příjem a translokace živin a hodnocení efektivity využití živin v porostech; kultivační experimenty.

Working stays abroad / Zahraniční stáže

1996 - Institute of Botany, Jagellonian University, Krakow, Dr. Malgorzata Kotańska; clear-cut grass vegetation and soil interaction.

1997 - Ithaca College, Ithaca, USA, Prof. John Bernard; growth of clonal plants on sites with and without pollution impact.

1999 - Wageningen Agricultural University, Netherlands, Prof. Frank Berendse;
- Utrecht University, Netherlands, Prof. Roland Bobbink; methodology of nutrient use efficiency of grasses.

Projects / Projekty

1996-1999: Plant growth and development in normal and polluted sites. Joint research project - NSF USA and AS CR. (*Bernard, Fiala, Květ, Holub, Tůma*)

1998-2000: Degradation of meadows of a natural hydroserie - ecological and soil processes. Grant Agency of the Czech Republic. No.206/98/0216 (*Fiala, Holub, Sedláková, Tůma, Záhora, Zelená*)

2000-2003: The influence of different types of management on changes of biodiversity in the Protected Areas. Ministry of Environments of the Czech Republic, VaV 610/10 (*Sedláková, Chytrý, Fabšičová, Holub, Tůma, Záhora*)

2002-2004: Nutrient use efficiency of grasslands with expanding *Calamagrostis epigejos* under climatic variation. Grant Agency of the Czech Republic. No.206/02/P023 (**Holub**)

2002-2004: The relationship between nutrient availability, their utilization and successful expansion of tall grasses in dry grassland communities. Grant Agency of the Czech Republic. No.206/02/0581 (*Fiala, Fabšičová, Holub, Sedláková, Tůma, Záhora*)

2006-2008: Vliv různých srážek na rostlinnou složku a procesy v půdě některých travinných ekosystémů, GA ČR r.č.526/06/0556 (BÚ: K. Fiala, I. Tůma, **P. Holub**, M. Fabšičová, R. Hédl, MZLU: J. Záhora, M. Tesařová, V. Zelená).

2006-2010: Interakce kapradinových porostů a půdy na odlesněných plochách ovlivněných kyselými depozicemi GA AV ČR r.č.: IAA600050616 (BÚ: I. Tůma, **P. Holub**, M. Fabšičová, R. Hédl, MZLU: J. Záhora, M. Tesařová, V. Zelená).

Cooperation with Universities / Spolupráce s VŠ

- Opponency of master theses
- course at MZLU („Nitrogen cycle“).

Published papers / Publikace

Fiala, K., Tůma, I., **Holub, P.**, Tesařová, M., Jandák, J., Pávková, A.: Importance of grass cover in reduction of negative processes in soil affected by air pollution. *Rostlinná výroba*, 47: 377-382, 2001.

Fiala, K., Tůma, I., **Holub, P.**: Effect of wet depositions on losses of nutrients from soil on deforested areas in the Moravian-Silesian Beskydy Mts. (Czech Republic). *Ekológia, Bratislava*, 20 (4): 373-381, 2001.

Fiala, K., **Holub, P.**, Sedláková, I., Tůma, I., Záhora, J., Tesařová, M.: Reasons and consequences of expansion of *Calamagrostis epigejos* in alluvial meadows of landscape affected by water control measures – A multidisciplinary research. *Ekológia, Bratislava*, 22 (2): 242-258, 2003.

Fiala, K., Záhora, J., Tůma, I., **Holub, P.**: Importance of plant matter accumulation, nitrogen uptake and utilization in expansion of tall grasses (*Calamagrostis epigejos* and *Arrhenatherum elatius*) into an acidophilous dry grassland. *Ekológia, Bratislava*, 23 (3): 225-240, 2004.

Fiala, K., Tůma, I., **Holub, P.**, Jandák, J.: The role of *Calamagrostis* communities in preventing soil acidification and base cation losses in a deforested mountain area affected by acid deposition. *Plant and Soil*, 268: 35-49, 2005.

Holub, P.: The nutrient use efficiencies of various alluvial meadows in the south Moravia. *Ekológia, Bratislava*, 20 (4): 366-372, 2001.

Holub, P.: The expansion of *Calamagrostis epigejos* into alluvial meadows: comparison of aboveground biomass in relation to water regimes. *Ekológia, Bratislava*, 21 (1): 27-37, 2002.

Holub, P.: The effect of increased altitude on the growth and nitrogen use efficiency of *Calamagrostis arundinacea* and *C. villosa*. *Biologia, Bratislava*, 58 (4): 805-815, 2003.

Holub, P.: Nitrogen use efficiency and the dominance of *Calamagrostis epigejos* in floodplain meadows. – *Ekológia, Bratislava*, 22 (2): 268-274, 2003.

Tůma I., **Holub P.**, Fiala K. Competitive balance and nitrogen losses from three grass species (*Arrhenatherum elatius*, *Calamagrostis epigejos*, *Festuca ovina*). *Biologia, Bratislava*, 60: 417-422, 2005.

Leisure interest / Zájmy

photography, travelling, gardening, basketbal, petanque and family.