

CURRICULUM VITAE

Name Otmar URBAN
Position Junior Scientist
Affiliation Laboratory of Plant Ecological Physiology
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Education

- M.Sc. studies: [Palacky University Olomouc](#), Faculty of Science, Biophysics (1991-1996)
M.Sc. Thesis: "The effects of enhanced UV-B radiation on the photosynthetic characteristics of Norway spruce (*Picea abies* [L.] Karst.) trees growing in field conditions"
- Ph.D. studies: [Palacky University Olomouc](#), Faculty of Natural Sciences, Biophysics (1996-2002)
Ph.D. Thesis: "Spatial differentiation of the CO₂ assimilation activity within Norway spruce canopy under the impact of elevated CO₂ concentration"

Academic and professional appointments:

1996 – 2005 Junior Research Scientist, Institute of Landscape Ecology ASCR
2005 – present Junior Research Scientist, Institute of Systems Biology and Ecology
ASCR
2003 – present Head of the Laboratory of Plant Ecological Physiology

Important research visits and fellowships:

1998 Technische Universität, Berlin, FG Landschaftsökologie / Ökologie der Gehölze,
Dr. Manfred Forstreuter; biochemical models in plant physiology
1999 Institute of Microbiology ASCR, Třeboň, Dr. Ladislav Nedbal; double modulated
fluorescence in plant leaves
2003-2005 visiting scientist, Department of Forest Ecology, University of Tuscia, Viterbo,
Italy, Prof. G. Scarascia-Mugnoza; daily courses of assimilation processes in
poplar trees treated under elevated CO₂ concentration in FACE systems

Educational activities

2003 Palacky University Olomouc, Faculty of Science, Course of Biophysical Plant
Physiology
from 2004 University of Ostrava, Faculty of Natural Sciences, Course of Plant
Ecophysiology

Selected publications (last 5 years)

Pokorný, R., Urban, O., Marek, M.V.: Effect of Norway spruce planting density on shoot
morphological parameters. *Biologia Plantarum* **48**(1): 137-139, 2004.

- Vrchotová, N., Tříška, J., **Urban, O.**, Pěkníček, L.: Variability of catechin and 4-hydroxyacetophenone distribution in Norway spruce needles in relation to their position, age, and growing conditions. *Environmental Pollution* **131**(1): 55-59, 2004.
- Špunda, V., Kalina, J., **Urban, O.**, Luis, Sibisse, I., Puértolas, J., Šprtová, M., Marek, M.V.: Diurnal dynamics of photosynthetic parameters of Norway spruce trees cultivated under ambient and elevated CO₂: the reasons of midday depression in CO₂ assimilation. *Plant Science* **168**(5): 1371-1381, 2005.
- Singh, M.K., Juhász, A., Csintalan, Z., Kaligarić, M., Marek, M.V., **Urban, O.**, Tuba, Z.: Preliminary estimation of bryophyte biomass and carbon pool from three contrasting different vegetation types. *Cereal Research Communication* **33**: 267-270, 2005.
- Hrstka, M., **Urban, O.**, Marek, M.V.: Long-term effect of elevated CO₂ on spatial differentiation of ribulose-1,5-bisphosphate carboxylase/ oxygenase activity in Norway spruce canopy. *Photosynthetica* **43**(2): 211-216, 2005.
- Urban, O.**, Tůma, I., Holub, P., Marek, M.V.: Photosynthesis and growth response of *Calamagrostis arundinacea* and *C. villosa* to enhanced UV-B radiation. *Photosynthetica* **44**(2): 215-220, 2006.
- Urban, O.**, Janoušek, D., Acosta, M., Czerný, R., Marková, I., Navrátil, M., Pavelka, M., Pokorný, R., Šprtová, M., Zhang, R., Špunda, V., Grace, J., Marek, M.V.: Ecophysiological controls over the net ecosystem exchange of mountain spruce stand. Comparison of the response in direct vs. diffuse solar radiation. *Global Change Biology* **13**(1): 157-168, 2007.
- Urban, O.**, Košvancová, M., Marek, M. V., Lichtenthaler, H. K.: Induction of photosynthesis and importance of limitations during induction in sun and shade acclimated leaves of five tree species from temperate zone. *Tree Physiology* **27**(8): 1207-1215, 2007.
- Urban, O.**, Ač, A., Kalina, J., Priwitzer, T., Šprtová, M., Špunda, V., Marek, M.V.: Temperature dependences of carbon assimilation processes in four dominant species from mountain grassland ecosystem. *Photosynthetica* **45**(3): 392-399, 2007.
- Lichtenthaler, H.K., Ač, A., Marek, M.V., Kalina, J., **Urban, O.**: Differences in pigment composition, photosynthetic rates and chlorophyll fluorescence images of sun and shade leaves of four tree species. *Plant Physiology and Biochemistry* **45**(8): 577-588, 2007.
- Soukupová, J., Csefalvay, L., **Urban, O.**, Košvancová, M., Marek, M., Rascher, U., Nedbal, L.: Annual variation of the steady-state chlorophyll fluorescence emission of evergreen plants in temperate zone. *Functional Plant Biology* **35**(1): 63-76, 2008.
- Urban, O., Vrchotová, N., Tříška, J., Marek, M.V.: Enhanced UV-B radiation decreases the specific phenolic compounds in Norway spruce needles. *Fresenius Environmental Bulletin* **17**(5): 564-567, 2008.