## Curriculum vitae

## Petr Macek

Born: 15th February 1978, Praha, Czech Republic
Status: Married, one child.

Education and degrees:

2004 – 2009: PhD studies, Faculty of Sciences, University of South Bohemia; The role of clonal plants in wetlands.

2007: University Joseph Fourier, Grenoble, three week stay at lab of prof. S. Lavorel, LECA, Laboratory of Alpine Ecology

2001 – 2004: Ms. studies, Department of Botany, Faculty of Biological Sciences, University of South Bohemia

2004: RNDr. (rerum naturalium doctor) degree in Botany

1997 – 2001: Bachelor studies, Faculty of Biological Sciences, University of South Bohemia

1992 – 1997: Bilingual Czech-French lyceum

Professional experience:

2010 – present: Estación Experimental de Zonas Áridas, Consejo Superior de Investigaciones Científicas, Almería, Spain, postdoctoral position (JAE DOC Fellowship, CSIC)

2008 – 2010: Institute of Botany, AS CR, Section of Plant Ecology**,** Třeboň, research fellow

2004 – 2010: Faculty of Biological Sciences, Univ. of South Bohemia, České Budějovice, research fellow

2001 – 2003: University of California, Davis – postgraduate research position: Linking ecosystem processes and community structure along salinity and nutrient gradients in tropical marshes; Belize, Central America. Project manager at research station based in Orange Walk, Belize

Honors / Awards:

2010 – JAE DOC 2009 Fellowship (CSIC, Spain)

2009 – Journal of Vegetation Science Editors' Award (for outstanding paper published by the journal)

2009 – Dean's award for excellent scientific results during Ph.D. studies

2008 – Grant Agency of Czech Academy of Science, GAAV, IAA600050802: Upward migration of sub-nival plants in E Ladakh: the role of plant traits and interactions under climate warming (Doležal, Adamec, Macek)

2006 – Grant Agency of Czech Academy of Science, GAAV, IAA601110702: Comparative ecology of tropical and temperate plants in the equatorial páramo (Sklenář, Kučerová, Macek).

2006 – Student Grant Agency, SGA 2006–18: Nutrient fluxes in tropical wetlands: from mollusks to tree islands. (Macek)

Foreign languages:
English – advanced; TOEFL, Arnhem, The Netherlands: 259/300 (in 2004)
French – advanced; Bilingual Czech-French lyceum (1992-1997)
Spanish – advanced; Russian – basic

Research experiences:
Field work: Belize 2001–2010, Nicaragua 2004, Bolivia 2007, 2008, Ecuador 2007, 2008, 2009, Indian Himalaya 2009, Chile 2010, 2011-2012.

Programming and statistical skills: Ordination analysis - Canoco, standard statistical skills (mainly under R and/or Statistica software), Visual Basic, basics of ArcGIS.

Fields of professional interest:
Plants and global changes; Ecophysiology of plants (including trees) at highest range of their distribution; plant interactions; plant functional traits; wetland plant ecology and ecophysiology; plant clonality and its role in stressful environments (including spatiotemporal models).

Professional service:
Journal referee for: Aquatic Ecology, Ecography, Folia Geobotanica, Hydrobiologia, Journal of Arid Environments, Journal of Environmental Management, Journal of Vegetation Science, Oikos, Plant Ecology, Web Ecology, Wetlands

Publications:
**Macek P.**, Pugnaire F.I., Klimeš L. Running out of luck: Uphill plant race in the Himalayas (under review).

Anthelme F., Jacobsen D., **Macek P.**, Meneses R.I., Moret P., Beck S., Dangles O. Biodiversity patterns and continental insularity in the tropical high-Andes (under review).

Sklenář P., Kučerová A., **Macek P.**, Macková J. The frost resistance mechanism in páramo plants is related to geographic origin. New Zealand Journal of Botany (accepted).

Fibich P., Vítová A., **Macek P.**, Lepš J. Establishment and spatial associations of recruits in meadow gaps. Journal of Vegetation Sciences (accepted).

**Macek P.**, Klimeš L., Adamec L., Doležal J., Chlumská Z., de Bello F., Dvorský M., Řeháková K. (2012) Plant nutrient content does not simply increase with elevation under the extreme environmental conditions of Ladakh, NW Himalaya. Arctic, Antarctic and Alpine Research 44: 62-66.

Macková J., Vašková M., **Macek P.**, Hronková M., Schreiber L., Šantrůček J. (2013) Plant response to drought stress simulated by ABA application: changes in chemical composition of cuticular waxes. Environmental and Experimental Botany, doi:10.1016/j.envexpbot.2010.06.005

Sosnová M., van Diggelen R., **Macek P.**, Klimešová J. (2011) Distribution of clonal growth traits among wetland habitats. Aquatic Botany 95: 88–93

**Macek P.**, Rejmánková E., Lepš J. (2010) Dynamics of *Typha domingensis* spread in *Eleocharis* dominated oligotrophic tropical wetlands following nutrient enrichment. Evolutionary Ecology 24: 1505–1519

Sklenář P., Kučerová A., **Macek P.**, Macková J. (2010) Does microclimate determine the freezing resistance in the páramo plants? Austral Ecology 35: 929–934

Košnar J., Košnar J., Herbstová M., **Macek P.**, Rejmánková E., Štech M. (2010) Natural hybridization in tropical spikerushes of *Eleocharis* subgenus *Limnochloa* (Cyperaceae): Evidence from morphology and DNA markers. American Journal of Botany 97: 1229–1240

**Macek P.**, Macková J., de Bello F. (2009) Morphological and ecophysiological traits shaping altitudinal distribution of three *Polylepis* treeline species in the dry tropical Andes. Acta Oecologica 35: 778–785

**Macek P.**, Rejmánková E., Fuchs R. (2009) Biological activities as patchiness driving forces in wetlands of northern Belize. Oikos 118: 1687-1694

de Bello F., Thuiller W., Lepš J., Clément J-C., **Macek P.**, Sebastià M.T., Lavorel S. (2009) The spatial components of functional trait diversity. Journal of Vegetation Science 20: 475–486 (honored by Editors' Award 2009)

Královec J., Pocová L., Jonášová M., **Macek P.**, Prach K. (2009) Spontaneous recovery of an intensively used grassland after cessation of fertilizing. Applied Vegetation Science 12: 391-397

Rejmánková E., **Macek P.**, Epps K. (2008) Wetland ecosystem changes after three years of phosphorus addition. Wetlands 28: 914–927

Rejmánková E., **Macek P.** (2008) Response of root and sediment phosphatase activity to increased nutrients and salinity. Biogeochemistry 90:159–169

Karbulková J., Schreiber L., **Macek P.**, Šantrůček J. (2008) Differences between water permeability of astomatous and stomatous cuticular membranes: Effects of air humidity in two species of contrasting drought resistance strategy. Journal of Experimental Botany 59: 3987–3995

**Macek P.**, Lepš J. (2008) Environmental correlates of growth traits of stoloniferous plant *Potentilla palustris*. Evolutionary Ecology 22: 419–435

**Macek P.**, Rejmánková E. (2007) Response of emergent macrophytes to experimental nutrient and salinity additions in oligotrophic tropical wetlands. Functional Ecology 21: 478–488

**Macek P.**, Rejmánková E., Houdková K. (2006) The effect of long term submergence on functional properties of *Eleocharis cellulosa* Torr. Aquatic Botany 84: 251–258

**Macek P.** and Lepš J. (2003) The effect of environmental heterogeneity on clonal behaviour of *Prunella vulgaris* L. Plant Ecology 168: 31–43

Presentations (last 5 years):

2010: 53rd IAVS Symposium, Ensenada, Baja California, México: "Biodiversity of seminatural meadows under various management regimes: a 16 years experimental study."

2009: 22nd Annual Conference of the Plant Population Biology Section of GfÖ, Bern, Switzerland: "Dynamics of *Typha domingensis* spread in Eleocharis dominated oligotrophic tropical wetlands following nutrient enrichment."

2008: 8th INTECOL, Cuiaba, Brazil: "The dynamics of the spread of *Typha domingensis* in oligotrophic subtropical wetlands following nutrient enrichment."

2008: The Herbario Nacional de Bolivia: conference "Avances de investigacion en bosques de *Polylepis* y sus alrededores" [Latest studies in *Polylepis* forests and surrounding ecosystems]. Different morphological and ecophysiological traits of three congeneric tree species from contrasting environment and their distributional consequences.

2008: Polar Research - Arctic and Antarctic Perspectives in the International Polar Year St.Petersburg, Russia: "*Usnea* species and their ecology un upwelling mesetas at James Ross island, Antarctica" (talk by O. Bohuslavová)

Posters (last 5 years):

Vítová A., **Macek P.**, Lepš J. 2011: Colonization of artificial gaps in a mesotrophic meadow. BES Annual Meeting 2011, 12 - 14 September, University of Sheffield, UK

Macková J., **Macek P.**, Mudrák O. 2010: Physiological characteristics of meadow species under different managements. 53rd IAVS Symposium, Ensenada, Baja California, México

**Macek P.** et al. 2009: Nutrient status of two dominant species at the sub-nival belt in NW Himalaya: does a general trend hold under extreme conditions? 22nd Annual Conference of the Plant Population Biology Section of GfÖ, Bern, Switzerland

Chlumská Z. et al. (incl. **Macek P.**) 2009: Nutritional status of high altitude plants in Ladakh, NW Himalayas. 22nd Annual Conference of the Plant Population Biology Section of GfÖ, Bern, Switzerland

Karbulková J., **Macek P.**, Šantrůček J. 2008: Relations between $\delta^{13}C$ of hypostomatous leaf disc, cuticular components and leaf history. JESIUM, Giens, France