

liquid feeding, and co-evolution with flowering plants have likely contributed to the evolutionary success in different lineages. We argue that even in the “age of phylogenomics”, morphology can still play a vital role in phylogenetics. In addition, it is essential for reconstructing evolutionary transformations at the phenotypic level, testing evolutionary scenarios, and for placing fossil taxa.

Poster II-26

Geographical patterns of genetic and morphological diversity of *Hordeum murinum* L. (Poaceae, Triticeae) in Central Europe

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Hordeum murinum L. (mouse barley) is one of the three taxa forming the *Hordeum murinum* complex. It is a thermophyte grass originating in Mediterranean region. *H. murinum* migrated into Central Europe in the Bronze Age, and currently is thought to be well settled species there. Across the Central and Western Europe it grows in anthropogenic habitats. This presentation aims at verifying the possible migration routes of *H. murinum* into area of Poland by analysis of geographical patterns of genetic and morphological diversity. Thus the project is first so compound phylogeographical analysis of *H. murinum*. Studied material included representatives of populations from the area of Poland, Germany, Czech Republic, Slovakia, and Ukraine. Genetic diversity was analyzed at the level of chloroplast DNA (through sequencing and PCR-RFLP analyses of non coding regions) and total DNA (RAPD markers). To describe morphological diversity 19 quantitative traits were measured. Two distinct haplotypes of chloroplast DNA were found among the analyzed *H. murinum* representatives. These haplotypes differ in geographic occurrence: in Poland and Germany it was found only one haplotype that also occasionally appears in Czech Republic, Ukraine and Slovakia, while the second haplotype is typical to the area of Czech Republic, Ukraine and Slovakia. RAPD analyses revealed four groups of genotypes among the analyzed *H. murinum* material. These groups of genotypes differ in geographic occurrence almost just like the haplotypes: plants from Poland and Germany belong to two out of four described groups, and occasionally appear in Czech Republic and Slovakia. Plants representing remaining two genotype groups occur only in Czech Republic, Slovakia and Ukraine. Morphological analysis of *H. murinum* revealed only continuous diversity. However correlation analysis between morphological and genetic diversity pointed out traits that divide *H. murinum* into two slightly distinct groups. Described patterns of diversity are interpreted to discuss migration routes of *H. murinum*.