

LIGULE ANATOMY AND MORPHOLOGY OF FIVE *POA* SPECIES

ZSUZSA K. SZABÓ^{1*}, MÁRIA PAPP², AND LAJOS DARÓCZI³

¹*Department of Agricultural Botany and Plant Physiology,*
²*Department of Botany, ³Department of Solid State Physics,*
University of Debrecen, 4032 Debrecen, Hungary

*:e-mail address: szabozs@agr.unideb.hu

Received June 1, 2006; revision accepted August 8, 2006

The morphological and anatomical features of ligules of some *Poa* species (members of *Poa pratensis* group: *P. pratensis*, *P. angustifolia*, *P. humilis*; species outside the group: *P. compressa*, *P. alpina*) were studied by light and scanning electron microscopy. They are described in detail, emphasizing interspecific differences and habitat-dependent variation of shape, length and prickle hair density. All ligules studied are membranous, without veins and stomata-like structures, and may have only a few mesophyll-like cells. The *P. pratensis* ligule rarely contains short prickle hairs. Short leaflike prickle hairs occur densely on the ligule of *P. angustifolia*. The ligule of *P. humilis* is densely covered by long prickle hairs. The long prickle hairs of *P. compressa* end in elongated, curved apices. There are no prickle hairs on the ligule of *P. alpina*. The density of hairs on the abaxial surface is habitat-dependent for all species studied. Ligule anatomy in the *P. pratensis* group is quite uniform, leading them to be grouped as closely related species, but the fine differences identified are useful for their identification.

Key words: Ligule, *Poa pratensis* group, *Poa compressa*, *Poa alpina*, prickle hair.