



STEM MORPHOLOGY OF THE *SIDA HERMAPHRODITA* (L.) RUSBY (MALVACEAE)

ANNA KASPRZYK*, AGATA LESZCZUK, MARCIN DOMACIUK, EWA SZCZUKA

Key words: *Sida hermaphrodita*, stem, morphology

Department of Plant Anatomy and Cytology, Institute of Biology and Biochemistry UMCS, Akademicka 19, 20-033 Lublin, Poland; * anna_kasprzyk@poczta.onet.pl

Sida hermaphrodita (L.) Rusby (Malvaceae) (Virginia Mallow or Virginia Fanpetals) is a tall perennial herb of the mallow family. The plant height varies from 1 m to even 4.5 m (usually up to 3 m). It has deeply lobed, toothed, maple-like leaves with significantly elongated lobe tips.

The inflorescence produces clusters of white flowers from August to October (or even longer, until the beginning of first frost) in the area of origin and from June to first frost in Poland. Seeds are shed throughout the winter and germinate in early spring. *S. hermaphrodita* originates from southeastern parts of Northern America, where it naturally grows in moist riverine habitats.

The habitat of this species is consistent with other presumed native occurrences elsewhere and because of this the species is not common in nature and moreover, it is not grown agriculturally and horticulturally in North America. The plant was brought to Europe in the 1930's and first introduced in Ukraine, and then in the 1950's – in Poland.

The observations of the structure of sections or crushed pieces of a 1 cm thick stem were conducted previously under light, Nomarski contrast, confocal LSM, and SEM microscopes (MAZURKIEWICZ *et al.* 2012). The authors described the characteristics of the particular tissues and cells of the *S. hermaphrodita* stem. Due to the interest in the industrial and energetic use of this species, the characteristic features of

the anatomical structure of the *S. hermaphrodita* stem have recently been investigated lastly in detail (LESZCZUK *et al.* 2012).

The observations of the morphological structure of the stem under light, Nomarski contrast, and SEM microscopes revealed that depending on the height, the morphology of the stem changed significantly. The thinner, upper part of the stem is covered with trichomes located dense enough to form an almost continuous layer. The lower parts of the stem become thicker and lose trichomes and stomata. The observations presented in this abstract were focused on the atypical sculpture of the surface of *S. hermaphrodita* stem.

References

- LESZCZUK A., KASPRZYK A., STANISŁAWEK K., SZCZUKA E. 2012. The characteristic features of structure of the stem of *Sida hermaphrodita* (L.) Rusby (Malvaceae). *Innovative storage technology for horticultural crops (Proc. Internat. Conf., Skierniewice, 20-21 November 2012)*: 20.
- MAZURKIEWICZ I., STANISŁAWEK K., CHLEBIJ K., LESZCZUK A., WYDRYCH J., DZIADCZYK E., DOMACIUK M., WŁOCH W., WILCZEK A., SZCZUKA E., BEDNARA J. 2012. Tissues and cells of the stem of *Sida hermaphrodita* (L.) Rusby (Malvaceae). *Roślina – źródło materiału badawczego. Plant – the source of research material (Proc. II Międzynarodowa Konferencja Naukowo-Szkoleniowa, Lublin, 18-20 October 2012)*: 249.