BOOK of ABSTRACTS

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(23rd SPPS Meeting)

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Institute for Biological Research "Siniša Stanković"
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Changes in light intensity induce the developmental instability of *Iris variegata* flower parts

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The development sensitivities of flower parts of *Iris variegata* were studied in experimental conditions with changes in light intensity as stressor. As index of environmental stress and developmental instability we used indices of fluctuating asymmetry (FA8 as size-corrected index and FA17 as composite index of all traits measured on standard and fall flower parts). The 103 genotypes from three native habitats (open, shaded and semi-shaded) were examined in two light intensities (low and high). The measurements have been taken at five places along the longitudinal axis of the flower parts in relation to the width from the main nerve to the edge of the object. Larger values of the size-corrected index FA8 were found in the low light treatment for genotypes originating from the open, while for genotypes originating from the shaded habitat development instability was greater in the high light intensity treatment. Genotypes from semi-shaded habitat did not show significant responses in both fluctuating assymetry indices to changes in light intensity. The composite index FA17 showed the opposite pattern for genotypes from the shaded habitat with higher values in the low light treatment, while genotypes from open habitat showed no significant response. These results illustrated that light intensity may be an important factor contributing to bilateral fluctuating asymmetry of flower parts when environment of genotype origin is taken into consideration, and depending on the choosen index of developmental instability.

Keywords: flower developmental stability, fluctuating asimmetry, light intensity

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