

Serbian Plant Physiology Society

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Institute for Biological Research „Siniša Stanković”, University of Belgrade

# 2<sup>nd</sup> International Conference on Plant Biology

## 21<sup>th</sup> Symposium of the Serbian Plant Physiology Society

### COST ACTION FA1106 QUALITYFRUIT Workshop



Petnica Science Center, June 17-20, 2015

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## SELECTED TALKS

## Population Scale Multi-year Monitoring of *Iris pumila* in Deliblato Sand: Flowering Phenology

OP6-1

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Population scale multi-year monitoring of flowering and fruiting of *Iris pumila* L. can shed light on various evolutionary issues such as mechanisms of flower color polymorphism maintenance as well as provide information on population structure and dynamics that is important for this species *in situ* conservation. In the monitoring process flowering is recorded each year in 35 experimental plots (more than 4000 m<sup>2</sup> in total) on two-day basis during flowering period (early spring) in population occupying undisturbed natural habitat in the Natural Protected Reserve of Deliblato Sands. That enables determination of spatial position, flowering date, flowering span, flower color, and pollination success for more than thirteen thousand individual flowering ramets per year. Preliminary findings indicate that in the second year of monitoring flowering started almost a month earlier and had almost two times greater flowering span compared to the first year. Number of flowering individual ramets was lower, but fruit to flower ratio was by the order of magnitude higher in the second year of the study.

**Keywords:** *Iris pumila*, natural populations, flowering seasons

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## Light induces variation in size and shape of *Iris pumila* flower parts in two natural habitats

OP6-2

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We employed the technique of geometric morphometrics to study variation of geometric size and shape of *Iris pumila* flower parts (standard, fall and style) from plants growing in two natural habitats (exposed and shaded) in a protected natural reserve of the Deliblato Sands. We applied analysis of variance (ANOVA) for centroid size (CS) and multivariate analysis of variance (MANOVA) with all shape variables (Procrustes coordinates) as dependent variables, and with habitat as fixed and clone as a random factor. Landmarks and semi-landmarks of standards, falls and styles were positioned in MakeFan6 and TpsDig program. The CVA (Canonical discriminant analysis) was used to visualize the differences of shape between the habitats with contrasting ambient light conditions. The heterogeneity of light conditions affected the flower shape. The mean val-