

## DNA barcoding of the *Epipactis* taxa native in Greece

Panagiotis MADEISIS<sup>1</sup>, Spyros TSIFTSIS<sup>2</sup>, A. MASTROGIANNI<sup>2</sup>, Natalia PELTEKI<sup>2</sup>,  
Andreas D. DROUZAS<sup>2,\*</sup>

<sup>1</sup> Institute of Applied Biosciences, Centre for Research and Technology-Hellas, Thessaloniki, GR-57001, Greece

<sup>2</sup> Laboratory of Systematic Botany and Phytogeography, School of Biology, Aristotle University of Thessaloniki, GR-54124, Greece

\* [drouzas@bio.auth.gr](mailto:drouzas@bio.auth.gr)

The genus *Epipactis* Zinn. constitutes one of the most difficult taxonomically genera of the family Orchidaceae, both in Greece and in the rest of Europe. This is mainly due to the breeding system and the remarkable morphological variability of its taxa, which, during the last 30 years, led to the description of many new taxonomic entities. In the present work, 22 taxa of the genus *Epipactis* native in Greece were studied using the DNA barcoding regions *rbcL*, *matK* and ITS-2. *Epipactis pinovica*, a species recently described, was also included. One to five specimens from each taxon were used in the analyses. The *rbcL* sequence was highly conserved, whereas the *matK* and ITS-2 sequences showed a significant number of SNPs. Based on those SNPs, 12 taxa (including *E. pinovica*) were discriminated, while the rest formed groups of 2-4 species showing the same polymorphism. These results reflect the taxonomic complexity of the genus and the possible misclassification of some morphological variants as distinct species, whilst the respective cases are presented and discussed.