

Regional Speciation or Taxonomic Inflation? The Status of Several Narrowly Distributed and Endangered Species of *Narcissus* Using ISSR and Nuclear Ribosomal ITS Markers

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Abstract The mountains of the southeast Iberian Peninsula harbor several narrowly endemic species belonging to *Narcissus* section *Pseudonarcissi* (*N. alcaracensis*, *N. bugei*, *N. enemeritoidi*, *N. longispathus*, *N. nevadensis*, *N. segurensis*, and *N. yepesii*) that are protected by regional Spanish laws. Most of these trumpet daffodils show a very similar overall morphology, and the correct identification of species is difficult unless the geographical origins of the accessions are known. ISSR (Inter-Simple Sequence Repeat) and nuclear ribosomal ITS sequences were used to assess patterns of genetic discontinuities present among the members of this section from southeast Spain. Species-specific ISSR bands were found in *N. bugei*, *N. longispathus* and *N. nevadensis*, but were absent in the other species. The multivariate ordination of the 288 ISSR-genotyped accessions showed that only *N. longispathus* and *N. bugei* were clearly differentiated, while the other species formed an unresolved group. ITS sequences of *N. bugei* were highly divergent from those retrieved from the remaining species, which were placed in a single largely unresolved clade in phylogenetic analysis. In conclusion, ISSR and ITS markers support the taxonomic distinction of *N. bugei* and *N. longispathus*. However, *N. alcaracensis*, *N. segurensis*, *N. yepesii*, *N. enemeritoidi*, and *N. nevadensis* could be merged within a single species (*N. nevadensis* for nomenclatural priority).

Keywords Evolution · Mediterranean flora · Molecular markers · Taxonomic inflation · Trumpet daffodils

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