

## Phylogenetic relationships of the Genus *Tamarix* L. (Tamaricaceae) from Iran based on nuclear and plastid DNA sequences

Reza Arianmanesh <sup>1\*</sup>, Iraj Mehregan <sup>1</sup>, Mostafa Assadi <sup>2</sup> and Taher Nejadiattari <sup>1</sup>

<sup>1</sup> Department of Biology, Science and Research Branch, Islamic Azad University, Tehran, Iran

<sup>2</sup> Research Institute of Forest & Rangelands, Tehran, Iran

\*Corresponding Author's E-mail: dr.r\_arianmanesh@yahoo.com

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### ABSTRACT

*Tamarix* L. with almost 54 species is the largest genus of the Tamaricaceae. This study was carried out on the species of *Tamarix* that growing in Iran. Plastid trnS-trnG sequences were obtained for 16 samples recognized by recent taxonomic treatments from Iran. In addition, we used 13 previously trnS-trnG sequences from GenBank to test the monophyly of *Tamarix* in Iran. Phylogenetic analysis were conducted using Bayesian inference. In this study we use DNA sequence data to identify species of *Tamarix* that growing in Iran, and to determine if the molecular data are congruent with the morphological distinctions that currently segregate taxa. We also test congruence of morphologically based sectional classifications and our molecular gene trees. The results indicate that *Tamarix* species from Iran constituted a monophyletic group. Data analysis indicates the three taxonomic sections based on morphology (Baum 1978) are not supported by the molecular analyses and to determine the evolution of *Tamarix* use of morphological characteristics coupled with molecular data will be most effective.

**Key words:** Iran, *Tamarix*, phylogeny, trnS-trnG, ITS.

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