**Chemo-systematics and LC-MS/MS metabolite profiling of the lichen-forming genus Evernia (Parmeliaceae) in Iran: focusing on identification, conservation, IUCN list**

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The commercially important lichen genus *Evernia* in Iran was revised. Two species, including *E. divaricata,* and *E. prunastri* were discussed from the perspective of phylogeny, taxonomy, chemistry data (LC-MS result as a chemometric tool), and conservation**.** We obtained ITS sequences from *E. divaricate* and *E. prunastri* and their phylogenetic position confirms the identity of these two taxa in Iran. We revised the existing literature that is relevant for Iranian traditional medicine and pharmacognosy; the results confirmed that *E. prunastri* is misused as "Uoshaneh" which was described in the Monumental book Al-Mansuri (Rasis; 854–925 CE). We also used SDM and GIS and modeled the two species *E. divaricate* and *E. prunastri* distributions under the current and future climatic conditions. We assessed the effectiveness of Iran’s protected areas for the conservation of our target species. We found that the distribution of these species will decrease under the predicted climatic changes while only 10% of the habitat of *E. prunastri* and 3% habitat of *E. divaricata* are protected by Iran’s protected areas. Since the frequency of *Evernia* in Iran is extremely low and their distribution is not effectively covered by protected areas we strongly recommend selecting new protected areas or expanding borders of current protected areas to cover habitats of these commercially important lichen species in Iran. Our Maxent models produced in this study can be used as a guide for future conservation and sampling programs for the two species in Iran. There is no possibility of mass collection and the commercial usage of *Evernia* in Iran. Based on this study, we suggest that, before any action to harvest *Evernia* for commercial purposes in Iran, (1) its habitat conservation priorities must be revised and (2) E. *prunastri* should be included in the Iranian red list.