

*Pilularia minuta* Durieu (Marsileaceae) is a rare and endangered Mediterranean species of temporary ponds. It occurs in different countries all around the Mediterranean Basin with a scattered distribution. In Italy, this species is known for Sardinia, Apulia and recently for western Sicily. During a field investigation, the species was found in the Hyblaean Plateau (south-eastern Sicily). The aim of this work is to analyze the ecological features and conservation status of *P. minuta* populations occurring in Sicily. The floristic composition of *Pilularia minuta* plant communities were determined using the standard relevé method. Three spatially differentiated belts with specific floristic compositions emerged from the numerical analysis (UPGMA method, Euclidean distance coefficient) and from canonical correspondence analysis (CCA), mainly correlated to the water level. Our results showed that temporary ponds mainly host amphibian vegetation belonging to the phytosociological class *Isoëto-Nanojuncetea*, which includes pioneering annual plant communities growing on periodically flooded soils. Most species belong to the Mediterranean element, with therophytes as the dominant life form. The floristic richness and diversity index of these plant communities increased from the inner belt towards the upper belt. Finally, a synthesis of all known localities of *Pilularia minuta* from the Mediterranean area is given, together with a new assessment of the risk status for Sicily and Italy.

