

## Status of species richness and *Scorzonera judaica* species at four locations at Al-Shoubak region in Jordan

Ibrahim Mohammad Al-Rawashdeh<sup>1\*</sup> and Ahmed Amri<sup>2</sup>

<sup>1</sup>Department of Biological Science, Faculty of Science, Al-Hussein Bin Talal University, Jordan

<sup>2</sup>Genetic Resource Unit, International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat, Morocco

\*Corresponding Author's E-mail: irawashdeh2002@yahoo.com

(Accepted June 5, 2016)

### ABSTRACT

Studying species diversity is crucial for monitoring, management and *in situ* conservation of dryland agrobiodiversity. The species richness and diversity index, along with the density and frequency of *Scorzonera Judaica* (Eig) species were assessed in March/April 2015 and 2016 at Alshoubak region using transect-quadrat approach. A total of 120 quadrats within three transects at each of the four locations located at 1554-1273m altitude were assessed for species richness. A total of 17 taxa-species were identified over the two seasons. In 2015, high species richness (9 species) was found at AlShoubak-Doshk site with 1273m a. s. l., while Fujaj/Qadsiah road showed lowest species richness (3 species), corresponding respectively to highest and lowest Shannon's diversity indices of 1.602) and 0.358. In 2016, Fujaj/Qadsiah road showed the lowest species richness (4 species) but Aljhair site had the highest number of species (9). Over two years, high values of Shannon\_index H (6.90), Simpson\_1-D (3.33), Evenness\_e^H/S (3.69) and Equitability\_J (4.09) were recorded at Alshoubak-Doshk location, which showed higher number of species. The highest values were recorded by *S. judaica*, *Artimesia herba alba*, 3.51 and 3.21, respectively, while Zero value (0.00) was recorded by *Achillea fragrantissima*, *Crocus sativus*, *Lasiopogon muscoides* and *Vicia sativa*. In general, lower elevations showed higher number of species compared to higher altitudes. *Scorzonera judaica* showed the highest density and frequency values at Fujaj/Qadsiah location. Three medicinal plant species namely *A. fragrantissima*, *A. santolina* and *A. herba alba* recorded in the region are still used in the folk medicine by local communities.

**Keywords:** density, frequency, yellow Viper's grass, *Scorzonera judaica*, species richness.