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## Component Piece of Therapeutic Plants: Toxicity Concerns

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### Description

The Maneh-Semelghan county of North Khorasan province because of climate diversity and topography has a very diverse and valuable vegetation reserves that constitutes a high percentage of medicinal plants. Based on the results of this study, the family of *Asteraceae* with 20 species of medicinal plants accounted for the largest number of species. Then the family of *Lamiaceae* with 18 species of medicinal plants had the most species. *Rosaceae* and *Apiaceae* families with 12 and 13 species respectively were next in line.

Identifying vegetation of each region is important for accomplishing other pure and applied researches in ecology. Especially in the Northern Khorasan Province that unique ecological and climatic conditions make it a special habitat for the floristic studies. Rangelands comprise a large fraction of Maneh-Semelghan region. People in this area are highly dependent on rangelands; they use range plants as sources for food, medicine, livestock production etc. Therefore, identifying floristic list of medicinal plants of this region is beneficial for protecting the endangered plants and for planning a sustainable use of medicinal plants. In addition to the many medicinal plant species are threatened with extinction in the region for various reasons and it is necessary to identify and protected.

### Aromatic Plants

Juniper evergreen forests, broadleaf forests of oak, hawthorn and pistachios and protected areas of Golestan and Darkesh are important resources and valuable reserves of Journal of Plant Sciences, medicinal plants and rangelands in Maneh-Semelghan. Due to people familiar with medicinal plants, many of these plants are known by local names and people are in widespread use in traditional medicine. The county has a great diversity of medicinal plants so that in the Darkesh region of Manehsamalghan, about 79 species of medicinal plants are known.

Accordingly, a lack of comprehensive information on the medicinal plants of Maneh-Semelghan was the most important reason behind this research. The main aim was to do a survey the flora and to identify the major plant phenotype and chorotypes of the medicinal plants in ManehSemelghan region. Result of this study can also be used for the applied researchers and natural resources experts such as rangeland management and conservation

Maneh-Semelghan County due to altitude and topography, rivers and plains, has a large weather variation and in general has mountainous, temperate and semi-desert climates. So that the relative humidity is low in the county and this amount increases from East to West. The absolute maximum temperature is 40°C that accrued in July and August (the warmest months) and an absolute minimum temperature is -18°C that happens in January (the coldest month) and average annual rainfall is 252 mm. During five years of research, at first based on the documented and undocumented sources of plants considered as pharmaceutical ones, the list of medicinal plants were prepared. Given that different parts of the Maneh-Semelghan region had climatic diversity and differ in terms of the phenology and flowering, Calendar of admission to various parts of the region were prepared. Then the medicinal plants had been gathered from the region. Along with the gathering of medicinal plants, a number of ecological parameters had also

been considered. The applied parts of species had been derived from various sources such as local knowledge and especially Identification of Medicinal and Aromatic Plants of Iran. In this manner the status of distribution of these species has been determined according to these Flora. Determining the life form was done by Raunkiaer criterion.

### **Medicinal Plant**

Some of the species in this area seem to be naturally rare. Most of the documented recent population decline is attributed to human activity increasing the risk of extinction as a result of their reduced population size. For instance, the construction of a public road seriously altered the population size. Other biological factors such as plant longevity and absence of significant levels of herbivore demolition do not appear to compromise the species survival in the short term. Based on the obtained results in chorotype percentage of medicinal plants in the studied area, the percentage of endemic specimens has shown a relatively noticeable percentage of all species.

Life form study in Behbahan region, Iran, showed that the most important groups were Therophytes. In this study, Therophytes were included 78%, Geophytes 7.2%, Phanerophytes 7.1%, Hemicryptophytes 4.9% and Chamaephytes 2.4% of the life forms species. Investigation of life forms in Sarshiv Area of Marivan, Iran, showed that there were various plants in different life form. Among all of them, Terophytes (35%) and Chamaephytes (3%) had the highest and the lowest plant species, respectively. The review of the geographical distribution of plants in the region showed that the species belonged to different Chorotypes and Irano-Turanian (50%) and European-Siberian (1%) had the highest and the lowest.

Life forms have close relationships with environmental factors. According to Archibold, the frequency of hemicryptophytes in a region represents the cold and mountainous climate. Note that the regional climate is cold and wet and Hemicryptophytes plants have been influenced by the climate and are abundant. Rahimi and Atri in a research on flora of Miandasht Wildlife Refuge in Northern Khorassan Province, Iran, reported that the most of identified species were Irano-Turanian also mentioned that a large number of plant species in river forest Behbahan, Iran, belonging to the regions of Irano-Turanian and common areas of Irano-Turanian and Mediterranean eruption, were the most important ecological groups. In the Northern areas of Khorassan research showed that 11.6% (29 of all 256) plant species were endemic.

Medicinal plants are an important aspect of ManehSemelghan Rangelands. They are important because of they provide accessible health care to the local population. With the introduction of new methods of health in many indigenous communities, non-indigenous pharmaceuticals are taking the place of traditional medicines. Medicinal plant knowledge has been shown to be more susceptible to the acculturation than other categories of plant knowledge. Medicinal plants resources are a valuable genetic pool that should be protected. Although they may not be used today, there may be a fundamental need for them in near future.