

## 3<sup>rd</sup> International Conference on **Integrative Biology**

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### **Conserving plant biodiversity: The long road ahead**

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**B**iodiversity refers to the variability among living organisms that includes diversity within species between species and ecosystems. The widespread loss of the plant biodiversity is one of the most serious crises faced by mankind today. The causes of this loss include deforestation, developmental activities, human population growth and modern agriculture that entailed introduction of genetically uniform varieties. Conservation of genetic resources can be either in situ or ex situ whose choice depends on the objectives, the breeding system and on the available resources at hand. In recent years in situ on-farm conservation has become an important component of conservation programmes wherein rural people conserve landraces or folk varieties for public good at personal cost. It is being increasingly recognized that people's participation also forms an important and integral part of the conservation programmes. Besides the conventional methods, current approaches for conserving plant diversity include the use of molecular markers and geographical information systems (GIS). Information derived from the use of molecular genetic techniques is being successfully applied in many aspects of genetic diversity management.

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### **Desert vegetation and species diversity in the desert ecosystem in North Africa**

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**N**orth African-Indian desert Province known as the Saharo-Sindian Province encompasses the great desert from the Atlantic coast of Morocco to the deserts of Sind, Punjab and South Afghanistan. The air is extremely dry, temperatures are high, rainfall is low, salty ground is abundant and the vegetation is uniform. The desert ecosystem in South Africa from a phytogeographical point of view may be due to its position which is located in the intersection of the different phytogeographical regions: Mediterranean, Irano-Turanian, Sudano-Zambezian and the Saharo-Arabian region. This may reflect the relatively rich floristic diversity of this desert. African desert (The greater part of Egypt belongs here) known also as the Sahara, but recently it has become usual to divide the entire desert region of North Africa into Libyan (on the east) and Saharan (on the west) sections. The Libyan portion of the Sahara is now called the Western Desert of Egypt. In this respect the Western Desert contrasts with its neighbor, the Eastern Desert, where landscape is characterized by several wadis. It is a rocky plateau dissected by a number of wadis. Each wadi has a main channel with numerous tributaries. Water availability is not the only restrictive factor for plant growth in the arid and semi-arid zones; nutrients are also usually scarce, and the excess of solar radiation is often an important additional source of stress for plants in these ecosystems. Combination of drought, high temperature and irradiation imposed a complex of stresses on seed germination, seedling establishment and plant survival in arid habitats.

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